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January, 1881.

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AN ILLUSTRATED MONTHLY JOURNAL, DEVOTED TO PHOTOGRAPHY.

Edited by Edward L. Wilson.

H. ROCHER, CHICAGO.

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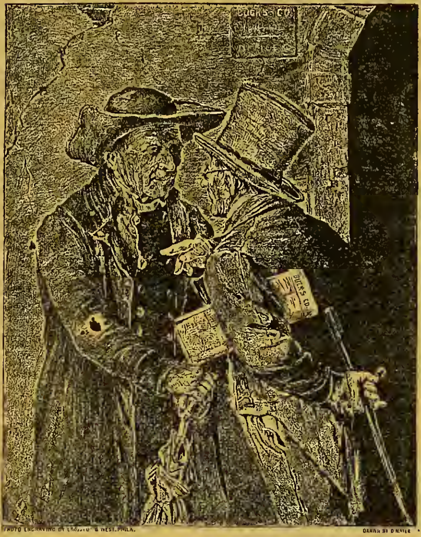

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☞ SEE OPPOSITE PAGE.

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"December, 1880."

☞ *SEE OPPOSITE PAGE.*

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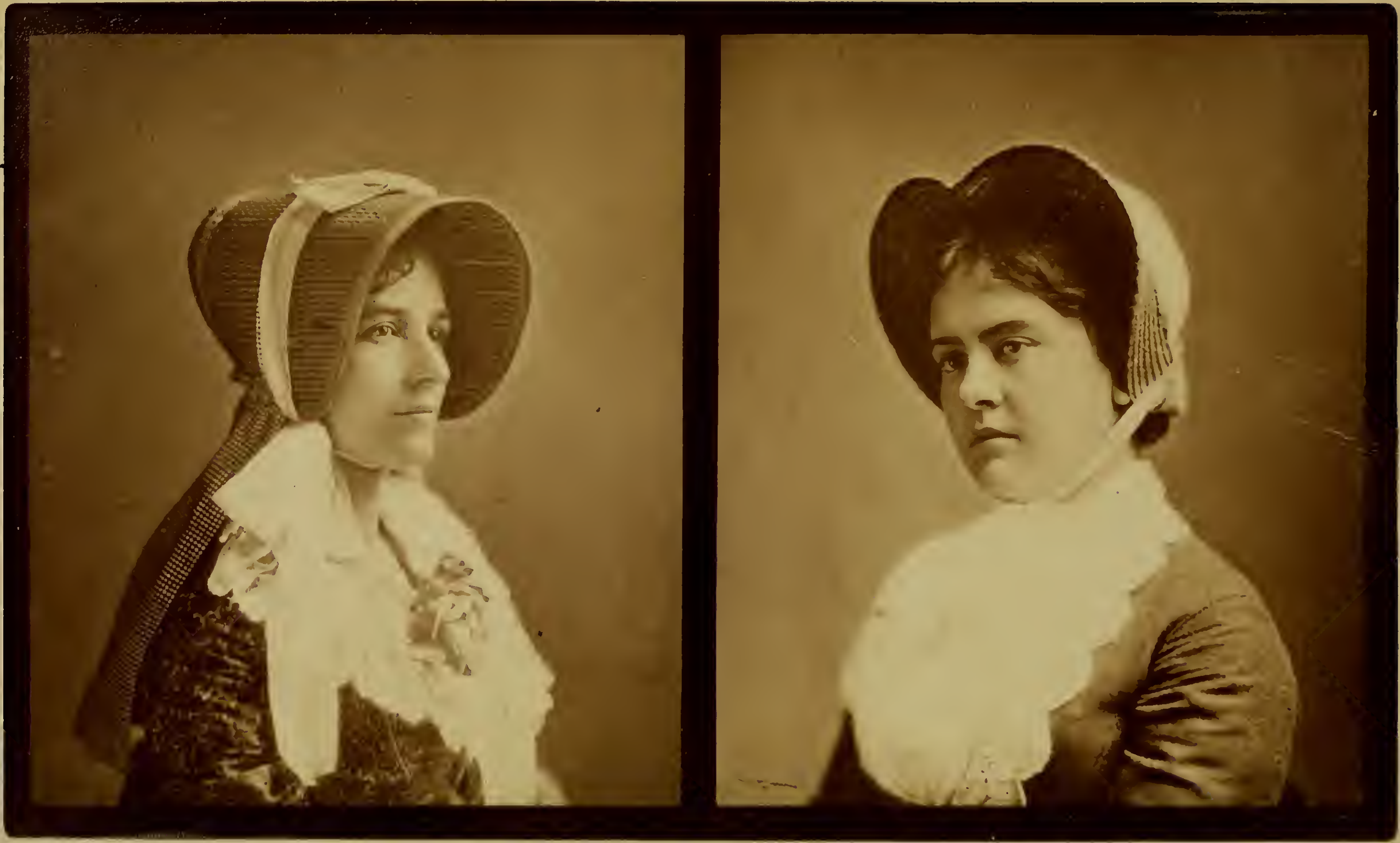

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THE

PHILADELPHIA

PHOTOGRAPHER.

v. 18

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VOLUME XVIII.

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EDWARD L. WILSON, PUBLISHER,
912 & 914 CHESTNUT STREET.
1881.

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February.—Portrait Studies. By H. Rocher, Chicago, Ill.
March.—"The Kitchen." From a plaque by L. Solon, London, England.
April.—Portrait Studies. By Marc & Schlum, New York.
May.—"A Bit of Old Ireland." Landscape by William Lawrence, Dublin, Ireland.
June.—"A Household Goddess." By J. F. Ryder, Cleveland, O.
July.—Portrait Studies. By Adam Salomon, Paris, France.
August.—An Osborne "Artograph" Study. By Gilbert & Bacon, Philadelphia, Pa.
September.—The "Tadéma" picture. By Alva Pearsall, Brooklyn, N. Y.
October.—"Brotherly Love." From statue by Pietro Lazzerini, Carrara, Italy.
November.—"Circe and the Gloriette." Landscape by Edward L. Wilson, Philada., Pa.
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THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. JANUARY, 1881. No. 205.

THE YEAR OF OUR MAGAZINE EIGHTEEN.

AND so it is. The eighteenth year of our magazine life begins with this issue. We well remember with what fear and trembling we began the *first* year, but it was *nothing* compared with this present feeling of incapacity and timidity lest we go wrong or lead wrong.

Each year our work grows upon us, each year our subscribers seem to lean harder upon us, each year our responsibility seems to increase. We have no desire to shirk; we feel more and more the need of being on the alert in behalf of our patrons. They may rest assured, therefore, that during the coming new year their interests will continue to be carefully looked after to the best of our ability.

As the leaders of nations congratulate themselves in their messages to the lawmakers, when their nations are "at peace with all the world," so can and do we congratulate you and us upon the fact that our path is unusually clear of the genus process-seller or pretentious patent-man. None the less watchful care is needed, however. He continueth to hanker after your flesh-pots, and only careful watching and wise resistance will keep him down.

Ignorance is even a greater enemy, and the photographer of to-day who keeps himself from the advantages offered by photographic magazines, is worse than an unwise virgin, for he has not even a lamp to trim, let alone a light burning, to lead him.

If you do not receive the *Philadelphia Photographer* regularly, then *subscribe now.* Many a wail has come to us during the last past year, from those who neglected to renew their subscription to this "best of photographic magazines." We cannot bring us to "go begging" for subscribers. We do not send it to any one unless it is wanted. If it is of value to you, it is worth paying for in advance. Please read our prospectus, and remember that, although we do wish it for you, one and all, unless you *do* take our magazine, and pay for it promptly, you, *more than likely*, cannot possibly have

A HAPPY NEW YEAR.

A GOOD NEW YEAR'S LETTER.

WE are daily in receipt of many kindly letters, full of good cheer and help for us and of hints for the use of the craft at large. The following is a fair specimen:

DEAR SIR: It gives me much pleasure to see once more in print Robinson's *Pictorial Effect in Photography*; although I missed getting it once, I shall not let it slip through my fingers a second time. So please send me one volume, cloth binding. I am also glad to see that you are going to favor us with a treat. You may also count on me for that;

and now, before I forget it, renew mv name on the list of subscribers for the *Philadelphia Photographer* for the year 1881.

A few months ago, I was very fortunate in securing two volumes of the *Photographic Art Journal* for 1851 and 1852. Although the photographic processes therein are altogether out of date, yet there are many things in it that the photographers of this day may well profit by, as in one place I read, "And it will be found more and more, as photography advances, that among those who are equal in chemical skill, some will get ten dollars, and others fifty cents, for pictures of the same size, for no reason but because their taste and artistic skill are superior."

So we have only to look higher and go higher to attain the prize, and keeping up the standard of prices is one means of attaining it, together with such good books as you select for us.

Again I read, "Even as the art of engraving and sculpture has improved under the criticisms of the press, so must that of photography. At the present day, it is viewed too much in the light of a mere mechanical occupation to arrive at any high degree of excellence. In too many instances men enter into it because they can get nothing else to do; without the least appreciation of its merits as an art of exquisite refinement; without the taste to guide them, and without the love and ambition to study more than its practical application, neglecting the sciences intimately connected with it, and leaving entirely out of the question those of drawing, painting, and sculpture, sister arts, a knowledge of which must tend to elevate the taste and direct the operator into the more classical and elegant walks of his profession."

This will never happen while low prices are the rage and photographers neglect the essentials quoted above.

And now a few words from a chapter on the Daguerrian art and its professors of the dollar notoriety.

"Daguerrotypes, common brand, various prices, ranging from thirty-seven and a half cents to a dollar—little or no demand. Genuine article, medium size, ready sale, and firm at three dollars." Remarks—public taste improving.

One would judge so now, by the way most of us have to fight to combat those first named, where our subjects are as illiterate as the cheap Johns.

I have posted in my room the above saying, also a ease of rules and suggestions, gleaned from different sources together with some of my own, one of which reads thus: "To-day, August 1st, four customers left on account of prices, and because I would not guarantee as good work for one dollar as I would for three and four dollars. If there are others as unreasonable as these, the less talk the less time wasted."

Many such sayings I have posted in my gallery, and, although I make slop-work if they desire it, I shame them out of it by these scraps and others of like sort, accompanied with specimens of choice dollar work of my own make, which reveal the hidden freckles and those beautiful saucer-shaped holes peculiar to people who have had an attack of the small-pox.

Perhaps my voice is not so silvery at times as at others, but it is on account of its being cracked.

I would like just here to say a good word for the Photographers' Association of America. It is this: long may it live after the wrangling part is sponged out, and the dollar men are on their feet—such as are worth saving.

I am not a member, but shall be soon, if I can get in with my ship, which, I fear, may not be at present, as there is no ballast in it.

Yours truly,

M. H. Albee.

Marlboro, Mass.

P. S. Please find post-office order to the amount of six dollars and a half, the same being for subscription to the *Philadelphia Photographer*, and one volume of Robinson's *Pictorial Effect in Photography.*

* * *

"Pictorial Effect in Photography is a gem—the *par excellence* of all photographic books. Its pages are full to a letter of choice and valuable instruction. If there is one who has not read it, I would advise him to do so at once."—G. Frank E. Pearsall.

A RELIABLE COLLODION EMULSION.*

BY GEORGE H. JOHNSON.

There are many to whom it is a source of gratification to be able to compound their own emulsions, and coat and dry their own plates, notwithstanding the fact that within the past year some very good commercial plates have been put on the market. Gelatin dry-plates have, during the warm months, so many faults and require such careful manipulation, that their most ardent admirers are beginning to revert to the more stable and certain collodion emulsion. To those who do not require rapid plates, I commend the following formulæ, which, if carefully compounded and pure chemicals used, will certainly produce excellent results:

Take six drachms of bromide of cadmium and four drachms of bromide of ammonium, place them in a glass mortar and rub together for at least five minutes. The mixture will become pasty during this operation. It must now be scraped out of the mortar, spread on a sheet of smooth writing paper, and then dried, either by placing before a hot fire or in any other convenient way. When dry return it to the mortar, rub down the lumps, and then store it for future use in a *well-stoppered* bottle. Each grain of this mixed bromide will be equivalent to one and a half grains of nitrate of silver. Then mix four or six ounces of bromized collodion by the following formula:

Mixed Bromide (Cadmium and Ammonium), ...	10 grs. to oz.
Cotton, Hance's Del. Cream, or, better, Schering's *Celloidine*,	4 to 8 “ “
Ether (sp. g., .725), . . .	½ “ “
Alcohol (sp. g., .820), . . .	½ “ “

Dissolve the double bromide in the alcohol; then add the cotton, and lastly the ether. Shake the bottle vigorously for one or *two minutes*,—not seconds,—and then set it aside to settle. In three or four days it will be ready for use. There is *no* advantage in keeping the collodion a long time to ripen for use; on the contrary, an old ripe collodion is not good for this process, but it is sometimes a good thing to mix a little old with a freshly prepared sample, when this latter is found to give too tough a film. It is impossible to give the exact number of grains of cotton which should be added to each ounce of the solvents, as so much depends on the character of the cotton used; some samples making a much more fluid collodion than others. The powdery kinds which used to be so much sought after for dry-plate work, are found not to answer so well in this process, one yielding a tolerably tough film being much better.

Formula for Emulsion.

Bromized Collodion, . . .	1½ ounces.
C. P. Sulphuric Acid,. . .	4 *drops.*
Nitrate of Silver, . . .	20 grains.

Mix as follows: First, put the silver into a test-tube and drop into it twenty drops of distilled water. Second, pour one ounce collodion into a two-ounce graduate, or other suitable vessel, and with a dropping-tube drop into it the four drops of sulphuric acid—stirring between each drop with a glass rod. Third, hold the test-tube over the flame of a spirit-lamp or gas-jet, at the same time keeping it in motion with a slight circular motion. The silver will very soon dissolve and the water boil. When this takes place, pour very slowly into the tube one drachm of alcohol. This may precipitate some of the silver; the tube must, therefore, be again held over the flame until this is redissolved. All the operations from this point must be done in the dark-room with the aid of the developing light. Fourth, pour the boiling silver solution *very slowly* into the collodion, at the same time stirring briskly with a glass rod. Rinse out the tube with a few drops of alcohol, boil, and then add it to the rest. Fifth, pour the emulsion, which has just been formed, into an *orange*-colored, eight-ounce stoppered bottle, and shake it as briskly as you can for at least one minute *by the watch.* The emulsion will now contain a considerable *excess* of nitrate of silver. The emulsion must now be set aside for ten or twelve hours, or, if the operations have been performed in the evening, until next morning, when the remaining one-half ounce of collodion must be added and the bottle well shaken for at least one minute. This should leave the bromide in *excess;* but in order to be quite sure that it is so, test the emulsion in the following manner:

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* Written for *Mosaics*, but received too late.

Half fill a small test-tube with distilled water; add two or three drops of a twenty-grain solution of yellow chromate of potash, and then pour in a few drops (five to ten) of the emulsion; shake, and then take the tube into daylight and examine it, when, should its contents have assumed the *faintest red* tinge, it will indicate that nitrate of silver is still in excess, and a drachm more of the bromized collodion must be added, and then shake the bottle and test again in same way. On the contrary, should the contents of the test-tube retain the yellow color, the bromide will be in excess, and the emulsion must now be left to itself for ten or twelve hours. It can then be filtered through surgical *absorbent cotton*, and used as an unwashed emulsion, or, if desired, it can be washed by coating four clean glass plates in succession until all the emulsion is flowed on them. They are then reared in a rack one hour, for the solvents to evaporate; after that they are placed on end in a vessel of water for half an hour; then they are taken out, the films stripped off the glasses in several pieces and steeped in a solution of twenty grains of tannin to one and a half ounces of water for another half hour. The pellicle is then taken out and washed in five or six changes of water, being careful to pour the water every time through a filter placed inside a funnel, so that should any of the pellicle escape it will be caught in the filter. Then wash the whole of the pellicle into the filter; leave it some time to drain; then carefully open out the filter, spread out the pellicle a little, cover it up from light and dust, and place in some *hot* place to dry; but the heat should not be sufficiently great to *char* the paper. When dry, the pellicle should weigh about forty grains, and this quantity will be sufficient for two ounces of emulsion. To redissolve it, add one ounce of ether and one ounce of alcohol; shake the bottle thoroughly and lay on its side *in the dark* till dissolved. Filter if necessary.

It is necessary, in coating the plates with this *washed* emulsion, to edge them, BEFORE and AFTER flowing, with an India-rubber solution, or coat them with a solution of gelatin,—sixty grains to eight ounces of water, to which are added two drachms of a ten-grain solution of chrome alum. This latter substratum works remarkably well for all kinds of emulsion films. The plates, if coated with an *unwashed emulsion*, must be placed in *trays* of running water until all the greasy lines disappear, before being reared away to dry. If a *washed* emulsion is used, they can be set up to dry as soon as flowed; a little artificial heat in a properly constructed drying box is certainly beneficial.

The plates can be *developed* by the following simple developer originated by Dr. J. J. Higgins, of New York:

Sal Soda,	1 ounce.
Bromide of Ammonium,	80 grains.
Strained Honey,	1 drachm.
Water, Distilled,	16 ounces.

Use sufficient to flow the plates, and add just before flowing one to two grains of *dry* pyrogallic acid. To such as admire a plate which will yield an abundance of detail (with a fair exposure) with sufficient vigor, and who can appreciate the advantage of having a preparation which will keep almost indefinitely, which is always ready for use, and can always be relied upon, I think what I have written may be worthy of consideration.

DISTORTION DOOMED.*

BY R. GOEBEL.

YOUR favor was in due time received. The following dodges may do good to some of the fraternity.

For the last two years I have taken advantage of the evil of the expansion of plain and albumen paper in printing. I cut up my paper two ways before printing,—some the long way of the sheet, but most the cross way. Now in printing the former paper, I use it only for long faces or thin, hollow cheeks; the latter for regular-shaped features. The improvement will show in all pictures, but most in large faces and enlarged copies where there is already distortion in the small original. Before the customer leaves the operating-room, I take a good look at his features and decide which way to have the paper used for printing, and mark the negative accordingly.

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* Written for *Mosaics*, but received too late.

The way the paper curls up after being cut shows easily which way it will stretch. I put mine in separate boxes.

Very often we have customers with toothless mouths, who, on account of it, cannot control their jaws to keep the mouth still, which is very bad with bearded men, since the smallest motion of the jaw will blur the whiskers. If these customers hold the gums together, the expression will not be natural. My improvement is to give these toothless subjects a small piece of cork to hold between their gums during the exposure of the plate ; the result you can see by inclosed print of lady.

[This last idea is certainly an excellent one. An old lady with set, protruding, under jaw is made to look amiable and natural.—Ed. *P. P.*]

TO YOUNG RETOUCHERS.*

BY B. Y. S.

I am myself a young retoucher, in fact, a mere fledgling, and for this reason I should like to give and receive a few hints upon the subject. I have not been at it long, and am just beginning to get the "hang of it," as we say.

One great fault with us young retouchers is our timidity ; at least, that was one of my faults. By timidity, I mean the lack of boldness and distinct character in our work. We are too careful and precise as to the way we use our pencil. We make a stroke, and then, as if afraid to let our work show, we immediately rub our finger across it, and probably blur instead of erasing the mark. Thus by repeatedly rubbing, we soon get the negative so smooth that it will not "bite," that is, it loses its grit, and we must again roughen the surface or the pencil will not take hold at all. Now, instead of doing this, we should, in the first place, varnish the negative with any good varnish ; and having dried it hard enough, we take some powdered brick-dust, which we tie up in a little piece of fine cloth (in order that no coarse dust may get out, as it might scratch the negative). We next tap the cloth bag of dust lightly on the parts of the negative which need retouching; then with the ball of one of our fingers rub the surface until we think we have enough grit, when the surplus dust may be brushed off, and we are ready for work.

Placing the negative on our retouching frame, we commence work. At first, we get too much lead on. We regulate the light so that it will not be quite so strong, and find we get a better effect without using so much lead. Next, we notice that in places where we have worked, there is a mottled appearance. We get our head closer to the negative and then everything seems to be getting on lovely, and we begin congratulating ourselves on our wit or our good luck in striking so good a plan ; when, drawing back to get a better view, we see that we have the mottled effect yet, worse and more of it. We conclude that we will try one more way, which failing, we will commit suicide. So we rub off some of our last effort, and getting our head as far away as we can from the negative and yet see the defects plainly, we go bravely to work once more. This time we work not in vain, and in a short time we see we are gaining ground ; from this on there is marked improvement in our work.

As we gain confidence and become less timid, we soon become quite expert in handling our "Dixon."

I use Dixon's S. M. graphite a great deal, and consider it very good ; but this is a matter of choice.

With these few suggestions, I will now retire, hoping that if they do not do any good they will draw out some remarks from other "greenies" like myself.

I will say, in gratitude to Mr. Wilson, that I have gleaned much good from his *Mosaics* and *Philadelphia Photographer;* they being my principal sources of information on photography ; and I thank him for the same.

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* Written for *Mosaics*, but received too late.

FOR THE POOR PHOTOGRAPHER.*

BY O. G. SHERMAN.

Having worked at the business some twenty years, I thought a word from me would not be out of place. I notice in the last *Mosaics* one artist says he has stopped making tintypes and will make nothing but photographs. Well, that may do in a large town; but if he was in a town of ten or twelve hundred inhabitants, and had opposition, and half of his trade was tintypes, I think he would not be likely to stop, but would do anything and everything that was respectable in the line of taking pictures.

Some talk about keeping the price of photographs up to three or four dollars per dozen for cards. That is all right, if you can. But put yourself in a small town, and use third-class instruments, with everything else accordingly, except chemicals, and then have another man by the side of you with all the high-priced and latest style of instruments, and see how you will come out. There are but very few of the well-to-do photographers who know anything about the discouragements that a poor artist has to put up with. Some will tell you how many patents and new processes they have worked out, and what wonders they have done in the business; and some of these are called free-hearted, whole-souled fellows, and looked up to by the fraternity. But let a poor photographer ask of one just a little knowledge, and, if you work within one hundred miles, he will turn you the cold shoulder in a minute, unless you come down with a twenty-dollar bill. But my advice to a poor photographer is, to take and read all the photographic journals you can get, if you can scrape up money enough to buy them; then work the best receipts, and be master of *them* before you try everything that comes along. Keep all your chemicals warm, from the soda bath up, and you will not have any trouble with blisters; also, use Slee's prepared card mounts. It was not long ago that I wanted a little information in the art, and wrote to one of those high-toned artists about the matter. He said, "Pay me ten dollars." Well, I went without the knowledge. Another poor photographer went into a town to take pictures for four days during a fair, and tried to buy a little collodion of one of those free-hearted artists, but was refused, on account of his coming there to work a few days.

SPOTS ON NEGATIVES.*

BY J. S. HOVEY.

Having written a couple of articles heretofore on the trouble of spots on negatives, viz., a too acid bath, and particles in running water used for cleaning plates to albumenize, I will now mention one other source of this same trouble, and that is *too much albumen.*

I was annoyed with these specks a long time before finding out what caused them, but at length, after looking in various directions, I tried reducing the albumen, and these spots immediately disappeared.

I use about one grain of dried albumen to the ounce of water, and rinse a little after flowing, and there will be no specks on the negative from this source.

These spots may be distinguished from others by their having a downward tendency in the direction the plate was set up to dry when albumenized.

RAPID DRY-PLATE FERROTYPES.*

BY INQUIRER.

In reading the accounts in the various photographic publications of the day, in which the rapid advance of dry-plate photography is treated of, the following question has suggested itself to me, viz.: Why do we not have a rapid dry-process adapted to ferrotypes? There may be many who will say, "Pooh! *ferrotypes*, common things as they are, are not worth mention." Are not such persons hasty in their judgment? I think so. If, in one month, the Scovill Manufacturing Company sold $12,000 worth of ferrotype plates (as they did do), I think that is good proof that ferrotypes are pretty largely called for. Aside from this, the fact that the artistic taste and knowledge required to make a good ferrotype is the same as in making a negative, counts for much; and there are, no doubt, many good photographers who began their career as ferrotypers, and therewith gained much useful knowledge in lighting and posing by taking ferrotypes.

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* Written for *Mosaics*, but received too late.

* Written for *Mosaics*, but received too late.

No, gentlemen, it won't do to ignore the ferrotype. There is, and for a long time will be, too great a demand for them, and the profits are too large on them for us to afford to put them aside. But there is still another way in which to look at this thing.

In using the various commercial dry-plates and emulsions, it is, I believe, universally directed that the fixing be done with hyposulphite of soda, as the makers of emulsions and dry-plates claim that cyanide eats out the detail, and even, in some cases, destroys the film. Now, we all know that hypo is not fit for fixing ferrotypes, and that nothing is left us but that poisonous cyanide to work with. What a boon, then, it would be to industrious ferrotypers, if they could be supplied with a quick-working emulsion with which to sensitize their plates, do away with that sloppy, troublesome bath, and, best of all, get rid of the poisonous, health-killing cyanide. Will not some one of our enterprising emulsion-makers set their wits to work and give us an emulsion that, with some simple developer like ferrous-oxalate, will be sure to give sure and quick results, and that can be well and brightly fixed with hypo? I am very sure that some of the thousands who make ferrotyping a specialty would adopt it, if only on the score of healthfulness.

Think of it, ye emulsion-makers, for, once established, you will find that for you there will be (if not millions) very much money in it. Once get the edge of the wedge entered, and you will not lack in aid to drive it clear home.

* * *

Robinson's Pictorial Effect is bound in cloth at $1.50, and paper cover, $1.00. It is a *useful* book, and every ambitious photographer should read it. See advertisement.

ABOUT THE P. A. OF A.

It will be remembered that at the Chicago Convention, our esteemed Paris correspondent and contemporary, Mons. Leon Vidal, was made an honorary member of the Photographers' Association of America, and that it was proposed that the new-born Association harmonize with the Photographic Syndical Chamber of France.

These actions have not only called forth a pleasant letter from the Syndicate to President Carbutt, informing him of his election to honorary office, but the following, which will immediately interest all the friends of the Association and of our art:

Syndicate Chamber of Photography.

Extracts of the Meeting held October 19th, 1880.

Mr. Leon Vidal presents communication of a letter which he has received from Mr. Wilson, editor of the *Philadelphia Photographer*, corresponding member of our Syndicate, relating to the Photographers' Association of America, the basis of which was to have been arranged at the Chicago Convention.

This took place in July last; but the Syndical Chamber not having had any meeting since that date, on account of the vacation, Mr. Vidal could not present his communication, and, consequently, it was impossible for him to give to Mr. Wilson a reply in proper time.

Mr. Wilson expressed the desire that a fraternal understanding should exist between the Syndicate of French photographers and the new American Association.

This desire is taken into consideration unanimously by the members of the Syndical Chamber, which, on the proposition of its President, nominates honorary President of the French Syndicate the President of the Photographic Association instituted at Chicago.

Mr. Vidal is instructed to transmit, on the part of the Syndicate, to Mr. Wilson, all the sympathy entertained for the new Association, of which he is one of the most active members, by the Syndicate of French Photographers.

The opportunities for putting into practice this mutual good fellowship cannot fail to present themselves, sooner or later, to the two American and French groups; and it is very desirable to strengthen at the start, by these testimonials of sympathy, those relations which the future will render more frequent and reciprocally useful.

My dear Mr. Wilson: I send you herewith a letter of thanks, so that you may send it to its proper destination.

To you, personally, I send the sincere assurance of my gratitude for the souvenir of esteem and good friendship of which you have given me a proof, for which I feel happy, in proposing me as an honorary member of the Photographers' Association of America.

Our Syndical Chamber, on my motion, has named as honorary President of the Syndicate of French Photographers the President of the American Association.

As soon as the letter of nomination shall be signed by the members of the Board, I will send it to you, in order that you may forward it to its destination.

You will see in the extract of the minutes of our last meeting, of which I send you a proof, before you get it in the *Journal de l'Industrie Photographique*, what took place there in reference to the American Association.

Let us endeavor to establish relations sufficiently close between Society and Society, and nation and nation, so that our different Associations shall have a result immediately useful.

Do not let us speak of *freemasonry*—a word which has too often a political significance. Let us create something of the kind, the whole scope of which will be openly acknowledged, since no questions can come up other than those service which we may mutually render to each other.

Such is the thought that our French Syndicate wishes to realize. Its principal object is to group in a more intimate manner the members of the photographic corporation, and to induce them, through more decided relations between them, and a brotherly understanding, to help each other as much as possible, and especially to form a solid body in all cases in which their common interest is at stake; as much bound to create as to destroy; to take the defensive, if occasion requires it, as well as attack, if it is necessary.

Let our distinct groups, separated by those landmarks which divide nations from each other, unite in the same thought. This will be still better, and we will all become stronger than we are in an isolated state, if we can succeed in forming between the different countries a kind of league, a general syndicate of photography, at least—a veritable International Photographic Society, under the direction of the Presidents of all the Associations, who, according to their needs, will correspond and consult with each other by letter, and after each has taken the advice of the deliberating body over which he presides. We would thus be enabled to form a vast scientific association, professional and utilitarian, from the fact that it will comprise a charitable object, clearly defined, to come to the aid, each at home, of foreign co-workers, in case that substantial aid could facilitate their endeavors against misery and the obstacles inseparable from such undertakings.

I limit myself to giving a sketch of my ideas, far from giving them the development which they deserve. I will make it the subject of a more extended paper, which you will please communicate, when convenient, to your new Association.

I am so much overwhelmed with work, especially on account of my three months' absence from Paris, that I have much trouble to catch up in my current work; and then here we are at the end of the year, and this makes my work threefold.

Adieu, my dear colleague. Believe in the assurance of my entire devotion.

Leon Vidal.

Cannot the Executive Committee take

measures, very soon, to investigate the various advantages and expenses incident to holding our next Convention at New York or Asbury Park?

It seems to me it would be a very simple way to adjust this controversy, by publishing what can be done at both these places; letting the members of the Photographers' Association fully understand the difference in prices, expenses, and conveniences of the two respective places. I, for one, feel as if the vote at Chicago was taken blindly, and without due consideration; most of those voting for New York city because they would like to visit the place, and did not expect to, unless prompted by more than an ordinary interest.

And if Mr. Ryder would also give us the terms for halls, board, etc., at Cleveland, which he could do with very little trouble, it would be an easy matter for the members of the Photographers' Association of America to vote by postal card for whichever place seems most practical to their minds, and send it to the Executive Committee. In this way the ballot could be as well taken as if the Convention was in session, and all the members be satisfied, as they would have the advantage of knowing what they were voting for.

Cleveland, to me, seems to be better, because of its more central location; and, I think, we can make as good terms, and have more advantages, if possible, now, than when the National Photographic Association held their *most successful Convention* in that place.

I seem to see Brother Ryder shake his head as he thinks of the hard work he might have to do if we went there; but his shoulders are broad, and his heart in the right place, and, I think, he would do much for the best good of the fraternity.

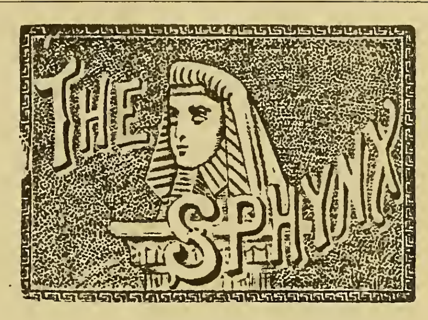
Hoping these suggestions will not seem out of place,

I am fraternally,

Mrs. E. N. Lockwood.

* * *

Mosaics, 1881, is going, and nearly gone. Buy *early*, as some will have to go without as they did last year.



Queries.

Will *Sphynx* please tell me what will remove collodion stains from linen?

J. A. W. P.

I have a graded background for busts; some rain got on it, making it spotted. Is there any way to fix it?

S. P. L.

Can you tell me where I can get some double dry-plate holders for 5-8 and 4-4 boxes, or give me any idea how to make them? Having never seen one, I can't understand how you can get a plate in on each side, and get them out again. I have been expecting, with each issue of your valuable journal, that some generous fellow would give us full details, with cuts, etc., how to make one with a pocket-knife and gimlet. But not a word have I ever seen written on the subject, though I take both journals (American), and am tired waiting for said generous fellow to appear.

J. L. Schaub.

[See article in our October and November issues.—Ed.]

Can some one of you tell why it is that a negative bath that has been worked until boiling and sunning are necessary, and after neutralizing with bicarbonate of soda and so treated, will often give a clean plate on the first immersion and foggy ones afterwards, until acid is added?

Inquirer.

Answers.

On account of a broken leg, I was not able to attend our Convention; money could not have kept me back. How a photographer could afford to stay at home is more than I can see. I will try and answer J. H. Goodrich's question to *Sphynx*. If the spots on the glass are white, let him add a drop or two of ammonia in the bath at night; stir it up, and you will find in the morning that the spots are gone; if not, add a drop more, as I think the bath contains too much nitric acid. J. H. Reuvers.

In answer to the inquiry of Mr. J. P. Goodrich in the *Philadelphia Photographer*, page 242, about spotting of tintypes, when I was in the same fix, I found by close examination that they fell in the same place on the same plate; so I conceived the idea that it was something that adheres to plates, and conclude that it is iron, though it is very hard to detect its locality before you develop. The same result is found when your developer dries on your pouring-vial, and falls off on your sensitized surface. And another cause may be, a stirred sediment in collodion. My remedy is to watch plates closely, clean and coat the same again, and see if it spots in the same place; wash the pouring-vial. I then add a little ether to my collodion, shake well, let settle half an hour, and try.

In answer to Mr. G. W., page 244, he seems to be troubled with tramps. Well, they are very easily beaten if you take the thing by the handle; you need not fear to take hold in a town where there is a population of five thousand. Just obtain the best building in town, get a new outfit of furniture and chemicals, employ a good assistant, and when a tramp comes along you advertise that you have just got a man from France, one of the best artists.

"Come, ladies and gents, every one,
And, for fun, see what can be done."

And when they come, make pictures that will discount any tramp work about one hundred per cent., and keep that up all the time. Charge high enough to live.

John B. Billings.

VOICES FROM THE CRAFT.

Answer to G. W.

In the August number of the *Philadelphia Photographer* is an article from G. W. entitled, "How some photographers live."

His case is a singular and, in all probability, an uncommon one. In the first place, where can that town be that has a population of 5000, with a good country surrounding, that will not support two artists, and still better support one who owns his home and other property? There is certainly something wrong somewhere.

The majority of people of the present day are usually good judges of photographs, and I think all, except the very common class, will patronize the man that does the finest work, let him be a permanent or a travelling artist. Now this classing all artists as tramps, is very unjust, to say the least. There are as fine men travelling as any that are located. Some may travel for health, others to see the country and for financial prosperity. I can at the present moment think of several artists that are well educated and strictly honest gentlemen, received in the best of society, socially, and morally, and yet they travel. When it comes to making an average comparison as to the character and social relations, it is safe to presume that between the travelling and the located artists there is little or no difference. One thing is certain, that if all travelling artists are to be classed as tramps, then why not, on the same principle, class those men sent out by wholesale houses on the same list? A tramp is a chap that goes about the country begging and stealing, with no visible means of support.

As regards to cutting down our prices, it is a matter much to be regretted that in cities some of our leading artists are making most excellent work at prices that must leave them a very small profit at the end of the year; so the travelling artist is not an exception when it comes to competition in prices.

The *Philadelphia Photographer* says, "perhaps this 'say' will bring out some suggestions." Trusting G. W. will take no offence, I would like to make a few. Were I situated as G. W. seems to be, I should by all means continue my subscription for the *Photographer*, study it well, and act upon its teachings so far as my circumstances would admit. I would make good work, establish fair prices, set up a good display of samples, use judicious advertising, and no doubt the citizens will support and appreciate home enterprise in preference to such a class of men as has been

G. W's misfortune to compete with. Dishonesty and rascality will reap its own reward, and honesty and enterprise can certainly hold its own against such opposition.

By some freak of fortune, G. W. may yet have to start out as a travelling artist to seek a more profitable location, therefore be charitable to all. Put yourself in their place, and "do unto others as you would be done by," and may health, happiness, and prosperity attend you and yours, is the wish of C. A R.

MR. SPOONER ANSWERED.

IN the *sweeping* article by Mr. J. Pitcher Spooner, in your July issue, I notice that Mr. Elbert Anderson is set up as a model, which ought to be followed by all young and ambitious photographers. I agree with him there; but there are several points which are not in accordance with my knowledge of Mr. Elbert Anderson, and which I hope you will correct.

Mr. Spooner says that Mr. Anderson cleaned windows and swept the floor. Yes, I know that, and know, too, that he washed and cleaned all the plates which were used in both skylights; but that was some 18 to 20 years ago, when he knew little or nothing of the art; he was, in fact, an apprentice, and, like any other at Mr. Kurtz's, he, too, had to begin with cleaning. But Mr. Anderson was ambitious, and his disgust for *scavenger* work was a stimulant that carried him rapidly through the various departments into the skylight and dark-room, and when he reached there, I am pretty sure his duties at the broom ceased, as that is the duty of the assistants in the various departments at the above named establishment. I remember that while I was assistant in the children's skylight, Anderson came to me, one day, and asked me to clean his skylight and dark-room for him (his assistant was sick at the time), and the following were his words on that occasion: "I'd do it myself, but then a sitter might come in, and it would not do for me to stand there with a broom in my hand." Not only would it *not* have made a favorable impression, but would also have shaken the confidence of the sitter in the capabilities of the man. I say *man*, because people would never call any one an artist who handles a broom. I think every operator is willing to do whatever cleaning is necessary in the dark-room, or, where there is an assistant, to superintend the cleaning thereof.

I am very sorry that Mr. Spooner is so unfortunate as to have so lazy a scavenger-boy, as Joe seems to be, in his employ; but I find it rather unreasonable for him to expect his operator, or any one else in his employ, to earn the salary for Joe by doing his work, while Joe, probably, is laying off somewhere, sampling tobacco and reading the latest news of the day.

Now, I would advise Mr. Spooner to discharge Joe, or see that he does his scavenger work, for which, evidently, he was engaged.

In conclusion, I would state that if the broom is to have anything to do with the elevation of photography to the fine arts, there must be, of necessity, something pertaining to art in it, and it would not be long before the sweeps of the street would extend their hands to us, not for the customary copper, but for a fraternal handshake; for if it will make artists of us, they who constantly use it will surely have some claim to that title.

The broom is degrading; even scavenger-boys feel that; and if they have any ambition, like Anderson, they will work hard to be advanced, and soon leave that instrument in the hands of their successors.

ADOLPH MUHR.

HOBOKEN, N. J.

MR. HEWITT, at a late meeting of the Photographic Society of Philadelphia gave the following as a formula for the intensification of gelatin plates, which, in his hands, gave very satisfactory results:

Sulphate of Copper,	100 grains.
Citric Acid,	100 "
Double Sulphate of Iron and Ammonia,	100 "
Water,	3½ ounces.

A few drops of a twenty-grain solution of nitrate of silver to be added just previous to use.

ANOTHER PAPER DEFECT.

As a subscriber to your very valuable journal, I would like to ask a question or make a complaint, just as you choose to call it.

Have you ever heard any photographer

complain of "water-marks" (I think that is what they are called) on their albumen paper? It is nothing more or less than the name of the maker (B. F. K. Rives) stamped into the paper in such a way that the printer must, out of every sheet, lose a cabinet or two or three smaller pieces, or turn out a print that is not fit to be delivered.

I inclose a print for your inspection. You will notice the words "B. F. K. Rives, No. 74," stamped into the paper in such a way that after burnishing, "which, by the way, always makes it worse," it would not make a finished job.

Please find out for me if there are any other of the profession annoyed in the same way, and perhaps the evil can be remedied.

B. C. PENTZ.

IN your 1868 *Mosaics*, I find a valuable article on enlarging, which is similar to the Megatype process, I presume. By the help of Mr. Folsom's article, in your last August issue, I have mastered that process without buying the right of the Megatype Company.

As to the Cameratype, it was published ten years ago. Gentlemen, read your journals and books.

R. H. CHILD.

CARVALHO'S PATENT METHOD OF PRODUCING PHOTOGRAPHIC IMAGES.

WE make the following extracts from the inventor's patent and specifications:

"The object of my invention is to dispense entirely with a fixing agent in the ordinary silver process, so as not only to simplify and accelerate the production of the image, but also to dispense with the printing of the positives.

"The invention consists in imparting to the substratum a dense color, exposing it to the action of the light in the camera, and developing it upon the colored ground, but without fixing, so as to obtain a positive picture by simple exposure and development.

"The substratum, such as collodion, albumen, gelatin, glue, or any other suitable substance, is mixed in excess with a dense, heavy color, which forms, so to say, the background for the picture. The substratum is placed on any suitable support, of glass, metal, paper, or other material. The substratum is sensitized, and then exposed in the camera to the action of the light in the usual manner. The plate is then developed; with this difference, however, that the manipulator has to observe the gradual appearance of the high-lights until a complete positive image is obtained on the background of dense color, instead of following the rule that when the shadows commence to disappear developing has to stop.

"In place of a negative, as heretofore, a positive is worked out, which stands out in bold and clear relief from the colored ground. No fixing in the dark-room is thereby required, and the result is a new type of photographic picture. The dense color forming the background causes the image to appear as a positive picture, and thus shortens and simplifies the ordinary collodion-silver process, as it admits the delivery of the pictures directly after the sitting, dispensing with fixing and printing.

"Having thus described my invention, I claim as new and desire to secure by letters patent,—

"1. As an improvement in the art of producing that class of photographic pictures in which nitrate of silver is employed as the sensitive agent, the process herein before described, which consists, essentially, in the following-named steps: First, providing the substratum or picture-supporting film with a tint or color of sufficient depth and opacity to intercept the rays of light and form the background for a positive picture; second, sensitizing said support by immersion in a nitrate-of-silver bath; third, exposing the same in the camera; and, finally, subjecting it to the action of a developing agent until the image becomes distinctly visible, and thus complete the picture, whereby the use of any fixing agent is entirely dispensed with, substantially as described.

"2. A photographic picture composed of a substratum or support provided with a color of sufficient density and opacity to intercept the passage of light, a surface rendered sensitive to light by means of a nitrate-of-silver deposit, and a surface deposit of iron or other suitable ingredient for developing the image and completing the picture, substantially as described, and for the purpose set forth.

"David Nunes Carvalho."

WRINKLES AND DODGES.

A New Retouching Fluid.

I ordered a Robinson trimmer from my dealer, and ordered the late style, as advertised by you in last *Philadelphia Photographer.* I have never found any reason to complain with anything I have bought advertised by you. I am an old reader of the *Philadelphia Photographer*, and I get it monthly. I send you a formula for a new retouching fluid—to use with the old gum surface, or to grind the negative and retouch it, and then flow over and to work on again, giving double chance to work; or to flow on the varnish. It takes the pencil very readily.

Take 8 ounces of pure benzine, and add 1 ounce of veneer varnish; shake it well and leave it settle, and it is ready. Hope you will publish it.

Neal P. Harrington.

Coolness.

In reading the *Philadelphia Photographer*, I have seen various means suggested for keeping chemicals cool. I have tried many ways, but find the following to be economical as well as practicable:

I take a box shaped to suit my room, say four feet long, two in width, and from eighteen inches to two feet in depth. This I fill with clean sand or earth, keeping it just damp by adding a little water from time to time. In this earth I set my baths, collodion, and developer. Since I have adopted this method, I have had no trouble from heat.

C. A. R.

Thinking that the following might help somebody in hot weather, I write it, and you can insert it in the *Photographer* if you think it worth while:

My collodion-bottle would get so hot that the stopper would not stay in and the collodion would not work well, and ice hard to get and very scarce in this small town. I hit upon the following: I took a fruit-can and fastened it in my water-keg, so that the bottom of the can would be in the water, and when the keg was filled the can would be surrounded with water to its edge. I put my collodion-bottle in it, and found it kept cool. By putting a thermometer in, I found it twenty degrees colder in the can than it was in the dark-room. Fill the keg as the water is used out.

You can word this to suit yourself. I write for the benefit of country artists, who mostly use a keg or small reservoir, which can be used in this way. All things worked nicely after using the can.

W. A. Sallee.

To Dissolve Iron Salts Rapidly.

At a late meeting of the Chicago Photographic Society, Mr. Shaw gave his way for dissolving iron salts quickly, which the Secretary said he could vouch for. The desired quantity of iron is put in a small bag of netting and suspended in a bottle containing water, and in a few moments is completely taken up by the water.

To Remove Silver Stains.

The best thing I have ever found to take silver stains from your hands and from white shirts, is common brown Castile soap. Rub it on your hand, and then apply cyanide; if the first application don't take it off, try the second or third.

P. G.

Process for Large Prints by Development.

Salt the paper with the following:

Iodide of Cadmium,	5 grains.
Bromide of Potassium,	3 "
Water,	1 ounce.

When dry float or mop.

Silver,	30 grains.
Nitric Acid,	2 drops.
Water,	1 ounce.

The above must remain on until the paper lies flat.

Now expose to good solar light, full exposure, about three to four minutes, until a faint image is seen. Develop with

Pyro,	2 grains.
Citric Acid,	4 "
Water,	1 ounce.

Turn the paper up at its edges to form a dish, and pour on the above. When fully developed, lay the print, *face down*, in salt and water, for a moment, to convert the free nitrate into chloride. The print is now ready for fixing in:

Hypo,	1 ounce.
Water,	5 to 6 ounces.

Let it remain about twenty minutes, and then wash in the usual way.

AUG. BARRETT.

HOW TO MAKE FERROTYPES GOOD.

I SEND you my mode of working, but suppose you get so many, you get tired of recipes. I will cut them short.

Bath, about thirty-five grains to the ounce; nitrate barytes, three grains to ounce; of late, collodion as given in "Estabrook's Ferrotype Developer," given in *Philadelphia Photographer*, February, 1878, by Mr. Horton of Boston. Fixing, hyposulphite of soda. Now, you may say, how did you make such a great change? My bath worked pin-holes. I added a lump of iodide of potassium about as large as a good-sized hickory-nut without the shell, filtered, then went ahead. I also omitted putting permanganate of potash in the collodion; the result you see.

I get a great deal out of photographic books, especially your journal and "Moses," as my old partner used to call *Mosaics*. I suppose on account of the variety of wisdom it contains.

I have the *Philadelphia Photographer* from 1869 up to now; also *Mosaics*.

S. P. GAUGLER.

GERMAN CORRESPONDENCE.

Dr. Eder's Researches on Iron Salts—Intensifying Gelatin Plates—Table Indicating the Density of Liquor of Ammonia—Photographing in Electric Light—Diapositives Direct from Nature.

I HAVE to record to-day, again, a new experiment by Dr. Eder the indefatigable, touching the sensitiveness of the oxide of iron salts. He studied the disintegration of the solutions of said salts, as well as the disintegration of the papers saturated with such solutions, in the light. He found that the mixture of oxalic acid and chloride of iron possesses the highest degree of sensitiveness of all, and if the quantity of this salt, disintegrated through the influeuce of the light in a certain space of time, be placed equal to 100, it will stand to the quantity of the other iron combinations, disintegrated in the same space of time, in the following relation:

Chloride of Iron + Oxalic Acid,	100
Oxalate of Iron,	89
Oxalate of Iron and Ammonia,	80
Oxalate of Iron and Potash,	78
Tartrate of Iron,	80
Tartrate of Iron and Ammonia,	80
Citrate of Iron and Ammonia,	15
Citro-chloride of Iron,	19
Tartro-chloride of Iron,	25

It is plainly seen that the differences are very great, but this regards only solutions; for if papers are saturated with such solutions, and dried, it will be found that the differences are much smaller; but, also, in this case, the mixture of chloride of iron and oxalic acid shows the highest degree of sensitiveness. For any practical application, however, only the oxalate of iron and potash has found use, which is dissolved in water, together with red prussiate of potash, and put with a sponge on drawings. This paper is now extensively used for reproducing drawings with the help of light, without camera. It turns blue in the light, and gives, therefore, when copied under a drawing, a white picture upon blue ground, which needs only washing in order to prepare it for fixing. There is this drawback, however, that this paper is considerably less sensitive than silvered paper—it takes at least three times as long for printing.

It is well known that the intensifying of gelatin plates often offers many difficulties. Mr. Wight, a very clever amateur photographer, uses with gelatin plates and Dr. Vogel's emulsion plates, very successfully, the following silver intensifier:

A.—	Gelatin,	5 grammes.
	Spirit of Verdigris,	50 c.c.
	Water,	100 "

This solution keeps, and can, therefore, be kept always ready on hand.

B.—	Sulphate of Iron,	5 grammes.
	Gelatin Solution A,	10 c.c.
	Water,	120 "

C.—Silver Salt,	1 gramme.
Gelatin Solution A,	1 drop.
Water,	48 c.c.

Solution B is first poured upon the plate, which has been previously acidulated in diluted spirits of verdigris (1 spirit of verdigris, 50 water), then 8 c.c. of B and 3 to 4 c.c. of C are added. Intensify as usual.

Another drawback of much importance in intensifying dry plates, which I have mentioned already in my last letter, is the extremely unstable strength of the ammonia, which evaporates very rapidly, especially from carelessly-corked bottles, and which, therefore, makes self-instituted tests in regard to its strength necessary now. This fact is especially true in regard to Dr. Vogel's emulsion, for which the specific weight of the ammonia is expressly placed at 91. It may be remarked here that a developer which may be very good for gelatin plates is not always appropriate for Vogel's plates, which latter have the character of collodion plates, and require, therefore, a different treatment.

In order to test the ammonia, take upon a scale the tare of a dry 100 C. measure, fill the measure with the ammonia to be tested, so that the lower side of the concave surface of the liquid reaches the 100 mark, and weigh it. From the weight, the strength of the ammonia is determined by the following schedule, which is for a temperature of 16° C. (12° R.). For higher temperatures, it will give too high, and for lower temperatures, too low results. The numbers, divided by 100, give the specific weights. The lighter the ammonia, the better it is.

Weight.	Strength.
90 grammes,	26.5 per cent.
91 "	23.5 "
91.3 "	22.6 "
92 "	19.5 "
92.25 "	18.6 "
93.2 "	17.2 "
94 "	14.86 "
94.5 "	13.4 "
95.17 "	12 "
95.5 "	11.125 "
96 "	9.75 "
96.5 "	8.5 "
97 "	7.07 "

My remarks about the application of the electric light in England, caused some experiments to be made here with that light. At the last meeting of the Society for the Advancement of Photography, Mr. Tusen exhibited some portrait plates obtained by him with electric light, stating that they were the products of the first experiments he made, which, of course, could not be expected to be equal to the English plates produced in that way. In his experiments he used a light machine, worked with a strength of eight-horse power. The arrangements were the same as Van der Weyde's, *i.e.*, the light did not fall directly upon the sitting person, but was previously thrown by a concave mirror upon a concave white reflector. The plates were Wratten's and Vogel's, the sensitiveness of which he stated to be almost equal. The instrument used was a Dallmeyer instantaneous lens, and the time of exposure proved to be about thirty seconds. The working with this light, he said, is not as easy for the novice as is generally assumed, the arrangement of the illumination especially requiring a certain routine, as one could not proceed in this case as in working in daylight, the electric light acting entirely different with the above-mentioned arrangement. For instance, the shaded side of the face, he remarked, does not by far appear as dark as the experience gathered in working in the daylight would lead one to expect; and it is remarkable that the light does not appear to decrease in the ratio of the reversed square of the distance. At a distance of seven feet from the reflector, he found it not much weaker than at four feet distance. Very striking and pleasing effects of light could be obtained, by letting a part of the light fall through a small hole in the concave mirror upon the person. With direct full-light, of course, he found the effect much stronger; to such a degree, in fact, that a portrait picture he took showed total over-exposure after five seconds' exposure.

Mr. Tusen, while he is convinced that with some practice he will soon obtain the same satisfactory results as Van der Weyde, doubts whether the matter will become of any special importance for Berlin, as there is no lack of daylight here, which makes the trouble attendant upon working with electric light unnecessary. He would have liked some very highly sensitive plates for his experiments, but he found again and again that the much-vaunted six, ten, and more times higher sensitiveness of the gelatin emulsion plates, as compared with the wet-plates, belongs in the realm of imagination. This latter assertion is of importance. In English papers, several experimenters, among others Abney, declare for a ten to fifteen times higher sensitiveness of the gelatin plates; and, in fact, a spirited controversy has been raised of late upon this subject, under the battle-cry of "Collodion *versus* Gelatin." I, myself, must confess, that when I want to obtain a good portrait with a gelatin plate, not in the bright light, but in an artistically subdued illumination, I must always expose one-third longer than a wet-plate. I refer only to the gelatin plates as found in the market, viz., the best English plates, which are advertised as "instantaneous."

Recently, attention was drawn here to an already known, but yet little tried method of obtaining diapositives direct from nature in the camera. Dr. Friedländer showed in the Photographic Society a collection of glass diapositives from Mr. Jähns, which, in regard to fineness, satisfy every demand. The material points of this process are as follows: The bromide of silver emulsion plate is exposed in the camera, and developed. The negative obtained thereby consists, as is well known, of metallic silver, which is formed at the expense of the bromide of silver contained in the layer. If the plate is now placed in nitric acid, the metallic silver is dissolved, and, as the latter had been formed at the expense of the bromide of silver, it follows that on those spots where the negative had been most acted upon, *i.e.*, in the light parts, now the most bromide of silver must have vanished, so that the layer there becomes diaphonous. The plate will now form a weak picture, the opposite of the negative, *i.e.*, a diapositive consisting of bromide of silver. If the plate is now exposed to the light and developed, the bromide of silver positive becomes a silver positive. As you see, the method is not new, but until now no such satisfactory results, as those obtained by Mr. Jähns, had been reported. It is believed here to be easier in practice to first obtain a negative in the usual manner and then to make a diapositive with the help of wet-plates.

Very truly yours,
Dr. H. W. Vogel.

Berlin, December 1st, 1880.

SOCIETY GOSSIP.

Chicago Photographic Association.—The regular monthly meeting was held in their rooms, College of Pharmacy building, on Wednesday evening, December 1st, President Rocher in the chair.

The minutes of the last meeting were read and approved. No new members were proposed; and no papers or regular subject being before the Society, the consideration of some negatives and prints made on dry plates, prepared by Mr. Meyer, of Chicago, was taken up.

Mr. Beebe showed a few prints from negatives made under the most unfavorable circumstances; time, half-past four, on a dark afternoon; no facilities, except those hastily improved, for changing plates, and exposure in no case exceeding six seconds. While the results were not perfection, they were of a decidedly favorable character, in proving that the dry plate will help the photographer out of many a tight place, and that every prudent man will always keep a few on hand for emergencies.

After the dry-plate matter had been disposed of, Mr. Rocher asked for some subject to discuss. Mr. Gentile, in a few well-chosen words, suggested that the always interesting subject of prices be the one taken up. He animadverted strongly upon the low scale of prices prevailing in the city, and thought something ought to be done to raise them. He spoke rather disparagingly of the business, and mentioned, by name, one or two men who he thought were more responsible than others for the existing state of affairs.

Mr. Hall rose to a point of order, and insisted that, according to all rules of parliamentary practice, all personal allusions should be frowned down by the chair, and further remarked that the very existence of the Society was endangered by such remarks.

Mr. Rocher was not inclined to agree with Mr. Hall, and believed that evils should be attacked boldly, and not handled with gloves.

Mr. Klein took the ground that the private or business affairs of any photographer were not to be discussed by the Society; and if the matter of prices was to be taken up, it must be in a general way.

After a considerable amount of desultory talk on the subject, in which, while all agreed something ought to be done to raise prices, exactly what was considerable of a problem, the bull was taken by the horns in a neat little speech by Dr. Garrison, one of the non-professional members, who spoke as one of the public, and also gave the experiences of the medical and chemical professions, of which he is an honored member. The Doctor's main point was that there was a certain limit, below which no professional man should go, and which the public should be made to understand represented the minimum of cost and time that good work can be furnished for. Then, in order to accommodate those photographers whose business, skill, and reputation warranted higher prices, he suggested that an elastic or sliding scale of prices be established, running from the before-mentioned lowest figure to one that would satisfy the most exorbitant demand.

The Doctor's remarks were received with much favor, and to clinch them, Mr. Smith offered the following:

Resolved, That a meeting of Chicago photographers, under the auspices of the Chicago Photographic Association, be called December 15th, to discuss the subject of prices.

Mr. Hall amended this by relegating the matter to a committee.

The amended resolution was passed.

The Chair appointed Messrs. Smith, Klein, Gentile, Green, and Collins as members of the committee.

On motion, adjourned.

J. E. Beebe,
Secretary.

Boston Photographic Association.—Meeting held at 333 Washington Street, Wednesday evening, December 1st, with President C. F. Richardson presiding.

The records of the last meeting were read and approved.

Notice of the death (November 29th) of Mr. Edward P. Hemtz, photographer and artist, at 13 Tremont Row, was read and voted to be placed on the records of the Association.

An interesting talk, with lantern illustrations of Mammoth Cave, was given by Mr. George H. Allen, and the Association tendered its thanks to him.

A communication from Mr. George S. Bryant, thanking the Association for their complimentary vote in making him an honorary member of the Association, was read and placed on file.

Mr. Lawrence Fragean was made a member.

W. H. Partridge,
Secretary.

Photographic Society of Philadelphia.—Minutes of the stated meeting held December 2d, 1880, the President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read and approved.

The Secretary reported that he had executed all the various missions intrusted to his care at the last meeting.

A letter from Mr. William Willis, Jr., was read, fixing the first meeting in January as the date on which he would give the practical demonstration of the platinum process.

Mr. Richard W. Davids was unanimously elected a member of the Society, Messrs. Seiler and Fox acting as tellers.

Mr. D. Townsend was proposed for membership by Mr. Carbutt.

Dr. Seiler, Secretary of the excursion party, presented a lengthy but interesting report of the late excursion over the Morris Canal.

On motion of Mr. Browne, the Secretary was requested to make an abstract of it, to be entered in the minutes, and that the report be filed among the Society's papers.

Mr. Browne read an abstract from a report of Dr. Kirkbride, of the Pennsylvania Hospital for Insane, relative to Frederick Langenheim, one of the earliest experimenters in photography, giving a short account of his connection with the art, and especially his interest in the entertainment of the inmates of insane asylums and other charitable institutions by means of the lantern.

Mr. Wallace exhibited some very successful transparencies on 11 x 14 plates, having been enlarged from 6½ x 8½ negatives. The extreme sharpness of these enlargements was remarkable. Mr. Wallace stated that, for transparencies made by the wet collodion process, a desirable tone could be obtained by first bleaching the positive by bichloride of mercury, and then flowing with a solution of cyanide of potassium saturated with silver.

Messrs. Fox and Corlies exhibited some successful prints from gelatin negatives.

Mr. Browne exhibited one of the cheap camera-boxes described at the last meeting. It was made in an accurate and substantial manner, and well calculated for amateur work. The outfit—comprising camera-box, a single combination lens, two double backs, tripod, and outside box—costing only $23.

Mr. Leaming stated that he had purchased one of these boxes, and found it to be perfectly satisfactory.

Dr. Seiler suggested that an inside diaphragm applied to a photographic lens would be very convenient, and give the operator a greater latitude in exposure.

Mr. Carbutt stated that the earlier forms of the Harrison lens were supplied with these diaphragms.

Mr. Corlies exhibited a carriage-lantern fitted with a ruby glass for gelatin work, which he said gave excellent satisfaction.

Mr. Dixon stated that if a plate of ground-glass was interposed between the ruby glass and the lamp, a much more diffused light was obtained, less trying to the eyes.

After a general discussion on the best form of light for the dark-room, the meeting was, on motion, adjourned.

C. R. Pancoast,
Secretary.

Minutes of the stated meeting held December 16th, 1880, the President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read and approved.

Mr. Fox, of the Room Committee, reported that there were several books missing from the library of the Society, and suggested that the rules governing the use of books should be more rigidly observed.

Mr. D. Townsend was unanimously elected a member of the Society, Messrs. Craig and Fox acting as tellers.

On motion of Mr. Fox, the following was unanimously adopted:

Resolved, That the members of this Society be requested to bring the best specimens of their work to the first meeting in May next, for the purpose of having selected from the number brought to the meeting the two most appropriate for presentation pictures to the members of the Society. The Room Committee are then to have loaned to them the negatives of the two pictures selected by them, and have one print made for each paying and life member, which shall be mounted and presented by the Society to them at the annual meeting in November, and to exchange the same with any society desirous of reciprocating.

Mr. Corlies suggested that on the second meeting of each month the members bring any lantern slides they may have; and that a portion of the evening be devoted to their exhibition.

This suggestion seemed to meet with general favor among those present, and would doubtless add much to the interest of the meetings.

After a general discussion on the desirability of a public lantern exhibition, the meeting was, on motion, adjourned.

C. R. Pancoast,
Secretary.

Association of Operative Photographers of New York.—Regular meeting was held in Beethoven Hall, December 1st, 1880, President Walker in the chair.

The minutes were read and approved.

The Secretary was authorized to send a copy of the Constitution and By-Laws to the *Philadelphia Photographer* and other photographic publications.

It was moved and carried that this Association attend the meeting of the Photographic Section of the American Institute, Cooper Union, in a body.

A newly-appointed literary committee

was composed of Charles F. Kutcher, George F. Conners, and M. H. Fahner.

A proposition was made that J. Traill Taylor be invited to read some paper relating to photography to the Association, and a committee was appointed to inform him of the action taken.

Adopted.

J. H. Hallenbeck and T. C. Roche were, *una voce*, elected honorary members of the Association.

A regular meeting was held in Beethoven Hall, December 15th, 1880, President J. Thomas Walker in the chair, and the full Board of Officers in attendance.

The minutes of the last meeting were read and approved.

The committee to extend invitation to J. Traill Taylor reported he had accepted, and appointed January 5th, 1881, as date of lecture. Report received and adopted.

Correspondence read, and Secretary ordered to answer.

The *Philadelphia Photographer*, *Photographic Times*, Anthony's *Bulletin*, and St. Louis *Practical Photographer* for December were received, and a unanimous vote of thanks was tendered the editors and proprietors for the same and for favors to the Association.

Dry and gelatin plates were discussed, and the courtesy of the floor being extended to the visitors, much interesting discussion took place. Electric and artificial lights in photography received particular attention, besides an article read from a German paper, describing a method of procuring photographs in natural colors.

The thanks of the President and Association were given for the entertaining and instructive matter read and described by their worthy visitors.

A. H. Atwood,
Secretary.

Mr. J. E. Watson, Detroit, Mich., sends us notice of the improvements he has lately made in his place of business—handsome apartments fitted up in the latest style, new and improved facilities for portrait work; everything to attract and please the customer. Mr. Watson has spared neither time nor expense in the matter, and we hope he is now reaping a rich reward in a perfect rush of holiday trade.

PHOTOGRAPHIC MOSAICS, 1881.

Our usual year-book is rapidly going, and two-thirds of the edition were ordered before the sheets were printed. Last year, some had to go without.

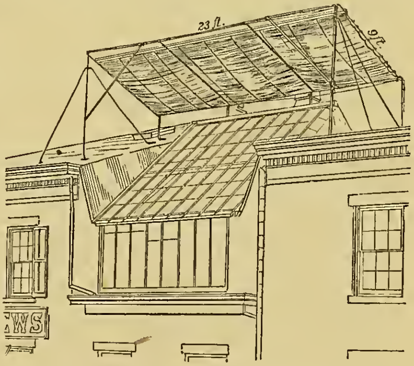
Please read the advertisement, and then act wisely. All the papers are good enough to go with the overflow articles which appear on other pages, but we only have room for the following:

AWNING FOR THE SKYLIGHT.

BY J. REID.

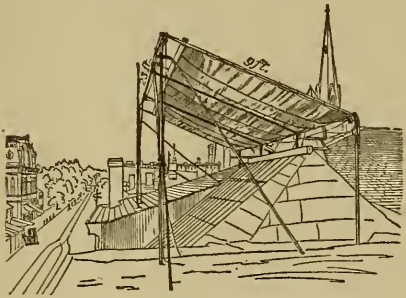
It is said that there is nothing new under the sun. So it is with my article. We take an idea from one machine and combine it with another, thereby making an entirely new machine, the common principles of each being already known.

My father used an awning as far back as 1849, in the taking of daguerrotypes, attached to an ordinary parlor-window, and so have others before him; and while various devices have been given from time to time to exclude the sun's rays from the skylight, there has been none that was simple in its construction, or else was unsightly and cumbersome. I do not wish to be understood, from the above, that all others are wrong, and mine the only one that is right. "Far from it;" as almost anything is right, so long as it answers the purpose for which it was intended.



I have an unobstructed north light, 12 x 14 feet, at an angle of 40°, lowest point seven feet from the floor, with side-light 5 x 12 feet, two feet from the floor. My awning-frame is made of one and a quarter inch galvanized iron pipe, 23 feet long by 9 feet wide, with two middle bars, 9 feet long and about 7 feet 6 inches apart. The frame is supported on the peak of the skylight by studs 1 foot high, which allows the free passage of wind. From the peak of the skylight the frame rises at an angle of about 18°, the whole properly braced and fastened to the roof.

The awning—8½ x 23 feet—is made of drilling, securely tied to the bar on the peak of the skylight, and with rings on the side and middle bars, so that it will slide up and down free and clear of all obstruction. On each of the 23-feet sides are fastened two pulley-blocks, through which ropes pass, for the purpose of raising and lowering the frame by a sliding motion. Thus it will be seen that all that is required is to raise it in the morning, tie it securely, and lower it at night, or on the approach of a heavy wind or storm.



As will be seen from the above description, the awning extends east and west about five and a half feet over the light, thereby cutting off the rays in the early morning and late in the afternoon; and on the north side extending up, and by dropping a plumb-line, would cover about two-thirds of the light, thus shielding the light completely from the sun.

I have used this for the past six months with perfect success, and would not, in the future, be without it. It relieves the eye from that glare that is so objectionable to a great many, and, besides, makes the operating-room several degrees cooler.

Try it, brothers, and you will never regret the outlay.

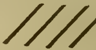
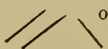
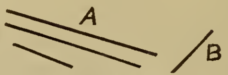
The accompanying cuts speak for themselves.

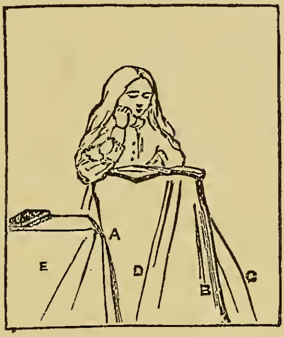
MR. H. P. ROBINSON'S PICTORIAL EFFECT IN PHOTOGRAPHY.

We wish it were possible to find space for extended extracts from Mr. Robinson's admirable work, or even to give a quota of the appreciative words which have already come to us from its readers. Undoubtedly it is *the* book, and treats upon *the* subject which photographers now need for their culture more than any other. *Art* instruction should come first, though the new books on other departments should not be neglected. As an example of Mr. Robinson's graphic style and mode of illustration, we make two brief extracts from his work, and must then refer our readers to the book itself for valuable details:

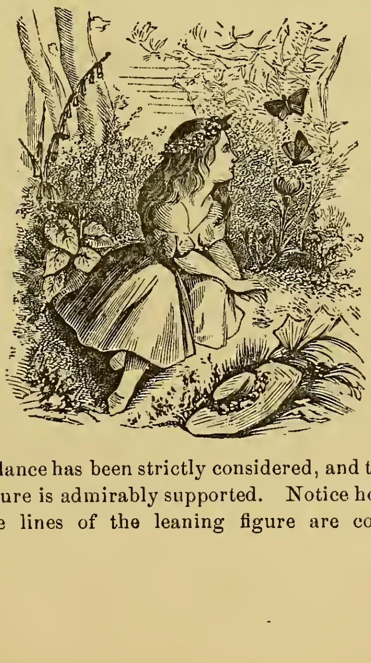
"As being of the first importance, and constituting, in fact, the skeleton on which all other parts of this subject hang, it will be well to first call the student's attention to a consideration of the balance of lines.

"All lines should be balanced or compensated. Without a due regard to this important quality, a picture would appear ready to fall to pieces.

"*Example.* Lines running in one direction, whether parallel or not, would give a weak and awkward appearance. A sense of falling is conveyed to the mind by lines repeating each other thus  When lines of this character occur, it will always be found possible to produce compensating lines in other parts of the picture, thus  or, if lines run diagonally down a picture, thus : a compensation for the lines A is found in the line B. There are many other ways in which oblique lines may be compensated, in a great measure depending on the ingenuity and skill of the artist. Here is an example in a portrait: A girl kneeling on a *prie-dieu* chair is reading a book placed on the back, which faces the spectator. The lines of the head and shoulders above the chair are perfectly compensated by the line of the arm, which runs in an opposite direction; but the lines of the chair, A and B, and of the dress, C, running in nearly the same inclined direction, would have given the effect of insecurity to the figure, and it would be painfully felt that the girl and chair would topple over, which would not have a pleasant effect. To counteract this sense of danger, the lines A, B, and C have been balanced by the line of the drapery, D; and, this not being sufficient, the table, E, has been introduced, while the dark spot caused by the book also helps to support the composition, as will be further explained in this chapter. This example is taken from an actual photograph, and shows, as I hope to show by other sketches also taken from photographs, how it is possible for the photographer to apply these rules to his art."



"I introduce a little sketch by Sir Noel Paton, in which it will be observed that balance has been strictly considered, and the figure is admirably supported. Notice how the lines of the leaning figure are contrasted by those of the arms, and, for fear these should not be sufficient, two trees have been introduced, to perform the same function in the composition. And the hat and plants on the ground perform the part of the point of dark so often mentioned in the chapters on landscape.



"This simple little figure serves very admirably to show the difference between a figure represented 'just as it sat,' and a picture produced by one who conforms to the rules of art."

By reference to the advertisement, our readers will find a full list of the contents, prices, testimonials, etc.

THE PHOTOPHONE.

THIS new wonder in science which has been invented by Prof. A. G. Bell, has been given a part of our name—photographic, and is therefore of more than common interest to us. No excuse is needed, therefore, for admitting a brief description of it to our pages, the points for which we gather from the inventor's patent specifications.

The practical intention of the invention is contained in the first five claims, viz.:

"1. The herein-described method of signalling or communicating, which consists in controlling a beam of rays, as to its amount or active strength in accordance with the signals to be given, and receiving the said rays on a sensitive substance forming a part of an electric circuit and affected as to its resistance in accordance with the amount or strength of the beam received upon it, whereby electric apparatus in the said circuit may be controlled to give signals corresponding to the controlling influence imparted to the beam.

"2. That improvement in the art or method of transmitting or reproducing sound which consists in giving a beam of rays an undulating or intermittent character in accordance with the sound-waves it is desired to produce, and providing a receiving apparatus adapted, when acted upon by the said rays, to produce air-vibrations or sound-waves corresponding to the undulations or variations in the said beam, substantially as described.

"3. The herein-described method of transmitting articulate and other sound by causing, in the rays proceeding from a photophonic transmitting-instrument to a photophonic receiver, undulatory variations in radiant energy similar in form to the sound-waves accompanying said articulate and other sounds

"4. The herein-described method of producing sounds of any desired pitch, amplitude, and quality by exposing a body sensitive to radiant energy to rays whose effective energy, exercised upon said sensitive body, is caused to vary in accordance with the vibrational form of the sound-waves appropriate to the sound to be produced.

"5. The herein-described method of transmitting articulate and other sounds by causing the sound-waves which constitute said sounds to produce similar variations in the beam of rays proceeding from a photophonic transmitter to a photophonic receiver."

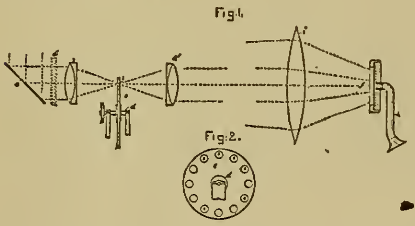


Fig. 1.

Fig. 2.

The construction of the apparatus will be well understood by the drawings above, and the accompanying description, viz.:

"Figure 1 is a general diagraphic view of a transmitting and receiving photophonic apparatus embodying my invention in what I have found to be a simple and effective arrangement for the production of a musical sound or note, and Figure 2 a detail thereof illustrating the interrupter employed in this instance.

"A ray from the sun is caused to take a proper direction in any suitable manner—in this case by reflecting it from a plane mirror or heliostat, *a*, into a condensing apparatus (shown as a lens, *b*), which should be aplanatic and achromatic to prevent dispersion, and which brings the beam to a focus, as at 2.

"A suitable screen—as a solution of alum in a glass cell, *a′*, for example—to obstruct the passage of obscure heat-rays without obstructing the passage of light, may be used to protect the apparatus from the effect of heat when the sunlight is used. I have found with certain forms of receiving-instruments employing selenium such a heat-screen does not to any great extent diminish the effect produced.

"The passage of the rays at the point 2 may be interrupted or controlled in any suitable manner—as, for instance, by an interrupting wheel or disk, *c*, pivoted on an axle, *d*, so that the periphery of the said disk lies in the path of the rays; and at or near the focus 2 this disk is provided with a series of openings or holes, 3 (see Fig. 2), lying in the range of the pencil of rays at or near the focal point 2.

"As the wheel, *c*, is rotated, the rays will intermittingly pass through the holes, 3, and then be cut off by the blank spaces between the said holes, which blanks should be at least as large as the sectional area of the beam at the point 2 to insure its complete interception. A series of alternate impulses and interruptions will thus be produced, constituting what may be termed an 'intermittent beam.' This beam passes on from the focal point 2, and may be directed to any desired point. The rays which diverge from the focal point 2 are again brought to the condition of a parallel pencil by the lens, *d′*, and thence pass to the receiving-instrument, *e*—shown in this instance as a thin disk or diaphragm, *f*, of hard rubber, placed in a suitable frame or inclosing-case, *g*, and which, as hereinbefore stated, will be affected by the intermittent beam falling on it in such manner as to produce sound-waves, the rapidity or pitch of which corresponds to the rapidity of interruption of the said beam caused by the disk, *c*. The diaphragm, *f*, may be placed in a suitable sound-chamber furnished with a sound-passage or ear-piece, (shown as a flexible tube, *h*,) by which the sound may be conducted to the ear of a listener.

"A condensing-instrument (shown as a lens, *i*) is preferably used to concentrate the rays and increase their effect in the diaphragm, *f*. The said condenser should be as large as possible, as the beam of light is somewhat dispersed in traversing any considerable distance.

"It is obvious that other forms of receiving-instruments may be used in connection with the above-described transmitter, or that this receiving-instrument may be used with other forms of transmitting-instrument. Various modifications of both of these will be hereinafter described.

"By varying the velocity of rotation of the disk, *c*, the rapidity of interruption of the beam will be correspondingly varied, and consequently the pitch of the sound produced at the receiving-station."

There are many other forms, but this one embodies all the general principles, and gives our readers an intelligent idea of the photophone, with some ideas as to the utilization of their old objectives.

FRENCH CORRESPONDENCE.

Impression by Contact on Divers Metals and Without Light—The New Emulsion of Dr. Vogel—Electro-motor Photo-metallic Actinometer—Preparation of the Sensitized Paper for Positive Prints by Development—Direct Formation of a Grain Similar to Engraving upon a Gelatin Cliche Developed with Oxalate of Iron—Formula of the Pyro-glyceric Developer Successfully used by Mr. Chardon—Our Wishes for the New Year.

WE have just seen some very interesting specimens of a new process for transferring to metallic surfaces line-drawings, first reproduced photographically, and then placed by contact, and without light, on the surfaces to be engraved. The action can last long enough to enable the same photographic impression to yield a large number of transfers.

The inventor of this process, Mr. Fish, of Lyons, has not divulged the substance which he uses to produce the above effect; but it is easy, having a knowledge of the results obtained, to find several substances capable of acting on metal by contact. But let us describe the operation, and it will be easier to understand the subject.

A mixture of any mucilage whatever is prepared containing, instead of coloring matter, such products as are capable, as certain phosphorescent powders for example, to attack a metallic surface by giving it color. This mixture is sensitized with bichromate of potash, and developed upon paper. Up to the present time line-drawings only have given satisfactory results. The image that remains after the complete development is therefore formed of a substance capable of coloring by contact, either a silver-plated surface or a planished copper-plate. The contact under pressure of the paper on the metal lasts about an hour. It is easy to understand that the paper print can, after a first impression, furnish a second one, and so on until quite a number is obtained.

It is possible, instead of making use of the development of a mixture, to produce on the paper a deliquescent image which is dusted over afterwards with a phosphorated powder of sulphuret of calcium or strontium. The effect remains the same, and we have, by the application of the print thus obtained on copper or silver, a perfect transfer of the image. This is an excellent means of transferring to copper, for the use of engravers, who require great precision, a design always obtained from the same sheet of paper. This guarantees a perfect similarity of the different transfers which are required to register exactly. For engraving maps this is especially adapted, and the chart department of our Minister of War has hastened to adopt this ingenious application of photography. It may thus be resumed: Impression by contact and without light of a line photographic print on a metallic surface. According to the nature of the metal, changes may be made in the acting substance. This furnishes another proof that new discoveries may be made, and that we are far from having yet exhausted the resources furnished by photographic impressions.

The new emulsion of Dr. Vogel begins to be noticed in France. It is now for sale, and we have every reason to hope, judging from hearsay, that it will contribute greatly to the use of gelatin plates among professional photographers. Up to the present time, they have been but little used, because it was necessary to purchase the plates already prepared; whilst now, thanks to a kind of emulsion of easy preservation, and which can be readily spread over the plates, they will be able to prepare their sensitized coatings. One thing, however, alarms us: it is the high price, perhaps, of the bottles of one hundred grammes of the Vogel emulsion. Everything depends, it is true, on the surface which it is possible to cover with this very small quantity. It is necessary, in order that the success of this new product should be complete, that not only it must give excellent results, but that, besides, they must be obtained at prices not exceeding those of coatings of wet collodion. It is certain that the price of seven francs will be reduced as soon as this product becomes more in demand, and in that event nothing more can be desired. Already several photographers have turned their attention to the manufacture of an emulsion with gelatin and gun-cotton.

Mr. Kornazewski, photographer at St. Jean de Luz, writes us that he meets with very good success by using the following formula:

Crystallizable Acetic Acid,	50 c.c. (1 fl. oz. 5½ dr.)
Alcohol at 36°, . . .	50 c.c. (1 fl. oz. 5½ dr.)
Pyroxylin, ...	1 grm. (15 grains.)

This forms a kind of normal collodion. He adds to this ten grammes (154 grains) of dry gelatino-bromide emulsion; then putting the vessel in a water-bath and gradually heating, he obtains a complete solution. Care is taken to agitate from time to time, in order to facilitate the solution and the mixture. We give this solution for what it is worth, never having tried it. Others of the same character will soon appear, and we will select, from all those that fall under our observation, the best to recommend. It is certainly a great step in advance, this hybrid combination of collodion and gelatin, giving, as a consequence, results having the advantages of each of these photographic substances.

You were favorably placed in America to see and appreciate the inventions of your illustrious scientist, Mr. Bell, and therefore the photophone, before we were aware of its existence, had no longer any mysteries for you. Our French scientists have lately taken up the matter, and Mr. Bréguet, our distinguished electrician, has just delivered here in Paris, upon this subject, a very remarkable lecture before a select and numerous audience. I shall have nothing to say in regard to this subject except in what concerns us. I endeavored to discover if it would not be possible to find a useful photographic application in this very interesting property possessed by selenium of modifying the electric current according to the intensity of the action of the light which strikes this metal. I have found this application, and I give it to you as conceived by me; subject, however, to further investigations in this direction and to a verification by experiments, if the idea can readily become a fact.

Do not let us forget that philosophy is the mother of all science, and before realizing, it is necessary to think. I have, moreover, consulted Mr. Bréguet on the subject of my idea, and he has approved of it. It is even possible that he will assist me in my experiments, and this would be of the greatest importance, as I would find in a man of his ability the most complete information in regard to everything pertaining to the science of electricity. The idea came into my mind on account of the property possessed by selenium, as mentioned above, to make a photo-metallic actinometer, and even an electro-motor. This would be all that could be desired in photometry and the use of photographic stops. In regard to the photometer, it is easy to make; and it will possess this advantage over all others, that of marking plainly the degree of light without any combination or decomposition produced by the luminous action upon a sensitized compound. Now there is nothing of this kind. A plate coated with selenium and covered with divers stops, then a dry electric pile, and, finally, a galvanometer; these constitute the photometer. The wires of the pile are attached to the selenium plate and thence to the galvanometer.

According as a greater or lesser degree of light falls upon the selenium, the current will meet with a greater or lesser resistance, and the deviation of the magnetic needle of the galvanometer will indicate different degrees. The sensitiveness of selenium is said to be very great when exposed to the light, and it is therefore very easy to understand the feasibility of a photometer such as we suggest, the variable degrees of which would be marked by a needle upon a graduated dial. The stops placed before the sensitized metallic plate have for object to modify the surface of action. The greater this is, the greater will be, for the same luminous intensity, the effect produced; and it is easy to establish in this manner a correlation between the degree of light during the exposure and the duration of this exposure. In fact, an electro-magnet may be put in motion by the current, and will move with variable degrees of celerity, according to the resistance to which the electric current is exposed. If, therefore, this electro-magnet puts a stop in motion, or, at least, a toothed wheel similar to those used in the striking arrangement of a clock, it is evident that at a given moment the escapement will occur, and the stop, previously opened, will close by the action of a spring. This being the case, we would have a photometer capable of measuring the variations of the light during the exposure, and, what is still better, a photometer always ready, since the luminous action on selenium does not appear to undergo any change. There is no necessity, therefore, for replacing a substance which has undergone a change, as is the case with other photometers, and the whole does not seem to offer, either in the invention or in the practical working, any great complications. My colleagues will therefore not be astonished to see me follow this track; but it is open to all, and I do not much care who arrives first, so that the goal is finally reached. This is the reason I give the idea to all, ready to applaud the success of whoever may obtain this result, which is, in truth, worthy of our most active investigations.

Sufficient attention is not paid, we believe, to the advantage of being able to prepare sensitized papers which permit us to make, by development, very rapid impressions. We all know how difficult it is to obtain, from a rather opaque negative, a great number of positives in these seasons of the year, in which there are fogs and cloudy skies. With a highly sensitized paper, a few seconds only suffice, and the development takes no longer than the ordinary toning. To make a good sensitized paper of this kind, the following method may be used:

First, the paper, which should be of good quality, is plunged into, or, still better, floated on a bath of bromide of ammonium at five per cent. When it is dry, it is sensitized in a bath of nitrate of silver at ten per cent., in which it is allowed to float for five minutes. The paper is then washed to dissolve the nitrate of ammonium which has been formed and kept in obscurity. This paper is highly sensitive, even to the light of a lamp. Develop with oxalate of iron, then carefully wash. Fix and tone with chloride of gold to obtain a purple tint.

On an average, in from five to ten seconds, it is possible to get an impression, and this shows with what rapidity a large number of prints may be obtained. Paper first covered with a thin coating of gelatin, then floated upon a bath of bromide, and finally sensitized with silver, gives an image well on the surface, and having a greater degree of vigor, for an equal time of exposure. If it is wished to make enamelled prints directly, take some very clean plates, cover the surface with talc, coat the edges with caoutchouc varnish, collodionize with normal collodion, and finally prepare them with a thin coating of gelatino-bromide placed on the collodion. Print in the light of a lamp by contact, then develop with pyrogallic acid and ammonia, to which bromide of ammonium has been added. Now fix and wash, and whilst in the water apply to the surface of the print a sheet of very white paper which has been previously gelatinized. The excess of liquid is driven off and the whole allowed to dry. When the desiccation is completed, nothing remains but to cut the edges with the point of a knife, and to remove the image, which carries with it the collodion film and presents a glacé appearance. We may on the first paper apply two or three thicknesses, in order to give more firmness to the enamelled card.

A new process has just been published for obtaining a grain for photo-engraving, as described by Major Waterhouse at the last meeting of the London Photographic Society. A carbon print developed on copper, and when yet wet and swelled, is dusted with a powder, the grains of which have been rolled in paraffine to prevent them from sticking to the gelatin. When the print is dry, the powder is easily brushed off, leaving a surface similar to a grained plate. It appears that in the portions of the image in which the gelatin is the thickest the grains of the powder penetrate more deeply and produce the deepest impressions.

Here is an idea which certainly is susceptible of useful application. As for us, we have found a method of making a grain directly on the negative by simply developing the image in a particular way. A gelatino-bromized plate having been impressioned is developed in a bath thus composed:

No. 1.

Water, . .	100 grms.	(3 ozs. 2 drs. Troy.)
Pure Sul. of Iron,	6 "	(92 grains.)
Crys. Acetic Acid,	6 "	(92 ")
Common Alcohol,	5 "	(77 ")

No. 2.

Water, . . .	1000 grms.	(32 Troy ounces.)
Neut. Ox. of Pot.,	300 "	(9 ozs. 5 drs.)
Brom. of Ammon.,	1 grm.	(15 grains.)

These baths are prepared separately, and are mixed in equal portions at the moment of using them. The plate to be developed is put into the dish when the mixture has been thoroughly made. It is first placed in the bath, the coated side uppermost, constantly agitating, and it is then turned so as to get the impressioned film underneath. For this it is necessary to make use of a dish wider at the top than it is at the bottom, so as to keep the plate suspended. The development is then allowed to continue, occasionally agitating. By the contact of the two liquids, a yellow, insoluble iron oxalate precipitate is formed, which covers very regularly the surface of the negative, and which is disturbed neither by the fixing nor the washing. This grain gives a kind of weft, which, when the negative is printed, produces on the positive image a granulation of white spots very suitable to photo-engraving printing. This is better than any artificial mediums that have been devised; and when the cliché is dry, it is collodionized with normal collodion, if it is to be kept, or it is only necessary to place it in water, and to rub the surface with a brush, to remove this yellow dust and have an ordinary cliché. It is essential to keep the cliché reversed during development, so as to avoid having the coating of the precipitate too thick, as this would defeat the object sought for.

The formula of pyrogallic developer to which glycerin has been added, previously recommended by Mr. Edwards, has just been successfully tried here by Mr. Chardon. Here is the formula he has used with success:

1.—Water, ...	1000 c.c.	(34 fl. ozs.)
	Pyrogallic Acid, . .	10 "	(3 fl. drs.)
	Glycerin, . . .	28 "	(8 ")
2.—Water, ...	1000 c.c.	(34 fl. ozs.)
	Pure Ammonia, . .	15 "	(4 fl. drs.)
	Glycerin, . . .	28 "	(8 ")

These solutions are mixed in equal proportions at the time of using; but a small quantity should be prepared of the solution No. 1, as it will not keep well for any length of time. The other, on the contrary, keeps very well, provided it is kept in a well-stoppered bottle. It appears that the addition of the glycerin gives more intensity, more rapidity, in the development, and, besides, reduces the time of exposure.

Doubtless, the next meeting of the French Society will offer some new and interesting facts, which we will be happy to send in our next article to our kind readers of the New World.

This letter being the last for the year 1880, we consider it our duty to thank them for the attention that they may have given us up to the present time, and to wish them, to the full extent of their desires, a prosperous and happy New Year.

Leon Vidal.

Paris, December 1st, 1880.

THE St. Paul and Minneapolis *Pioneer Press* of November 30th gives a lengthy account of a disastrous fire in Minneapolis, which nearly destroyed JACOBY's Block, which was owned by, and in which was situated the gallery of, Mr. W. H. JACOBY, the leading photographer of the city. The loss was partially covered by insurance; but Mr. JACOBY's rooms were entirely ruined, and his business for the time must suffer.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS OF NEW YORK.

THIS enterprising body of fellow-workmen is already filling an important and useful position in the trade. A copy of their Constitution is before us, which "sounds like business" all through. We quote such portions as are of special interest to the general reader, and commend the enterprise to them.

"SEC. 2.—It is the object of the Association to effect more intimate relations between photographers' employees, to assist and advise each other in, and how to procure situations when out of, employment; to extend, mutually, aid in case of need to its members (when the finances of the Association will permit them so to do), and to discuss scientific photographic subjects in open meetings."

"SEC. 5.—Non-resident employees may become members by sending one dollar initiation fee, and twenty-five cents for first monthly dues, with a letter as to qualification from some reputable photographer or a leading stock-house; and if such applicant's references are approved of, after investigation by the Board of Officers, said applicant will be accepted, subject to confirmation by vote of the Association. Three black balls oppose; their money to be returned if rejected."

It will be understood that this Association is neither a protective order nor a labor union whereby terms and wages are dictated to employers.

The proceedings of the Association are given in this column from month to month by the able Secretary, Mr. A. H. Atwood.

PHOTOGRAPHY IS A FINE ART.

BY C. D. MOSHER.

As there has been so much said of late by the hand-painters in portraiture, and a few sympathizing friends outside of that profession, who have stigmatized the photographers as machine-artists, picture-takers, etc., I take the liberty to answer them through your valuable journal, so that the photographers may, in a measure, correct this most erroneous impression of the public with whom they associate.

First. Photographic portraiture, for truthful likenesses, is becoming very popular, and is preferred by the first families and *connoisseurs* of art for family portraits in preference to hand-painted portraiture, which brings photography right in competition with the hand-painters of all kinds of portraits. And is it any wonder they cry it down, and try to bring it into disrepute, and tell their patrons it is only photograph, and does not require any art or skill to make it, when, in fact, it requires more skill to compound the chemicals to make a perfect photograph than it does to mix the paints for the finest oil portrait? Whilst one is made with the camera and chemicals, the other is made with brushes and paints.

Neither one of the processes can make a portrait of itself, but it must have an art-educated eye and brain to compound and manipulate the chemicals, to produce the light and shade of the texture of the skin perfect, and make the pose in harmony according to art rules and drawings, which are all the requirements of the old masters in art for a perfect portrait; and all this photography gives to our patrons by the hand of an art-educated man. And to make as artistic a portrait with the paints and brushes, you have got to have equally as good an art-educated brain, and apply the colors, pose, drawings, with light and shade perfect in the likeness on canvas, with precisely the same art-rules governing the making of the photographic portrait; and each portrait would be entitled, by the old masters, to the same merit as works of art, and both persons artists in their profession.

WHAT DOES IT COST TO MAKE A PHOTOGRAPH?

BY MRS. E. N. LOCKWOOD.

WHO shall place a valuation on the work of photographers? Shall it be he who manufactures or he who buys? Shall the price be estimated by the merit of the production, or by the demand and locality, or the opposition element? Is it not possible for us to have some standard for prices and qualities of work? Can we not, by uniting, teach our customers that it is a good thing to have a Photographic Association? for its members will give them better work, as they are well posted on all the improvements in the art, and are more reliable and earnest in their endeavors to produce the best possible results. People will willingly pay more where they can go with these feelings predominating than the opposite, and this I know from every-day experience.

And, as one step in this direction, I wish to ask all the members of the Photographers' Association of America to estimate what it costs them to make one dozen card photographs, or one dozen cabinets, and send the figures to me. I wish to compare notes, hoping thereby to pave the way for a new order and system of working which shall benefit us all.

To *estimate correctly*, consider rents, insurance, fuel, lights, help, stock consumed, common interest on amount invested in instruments, fixtures, and gallery necessities; also a percentage for wastes and breakages incident to every-day work, as well as the annual expense for the gaining of new information, and adding new grounds and accessories, which is necessary each year, not forgetting your own time and board; then deduct this sum total from the gallery receipts during one year, when, from the results obtained, you can easily determine what per cent. is clear profit on a dozen photographs.

Photographers are too apt to make their estimates by counting silver, gold, paper, and card-mounts, and think by so doing they have the whole cost (or very nearly) of their photographic work, when they come no nearer to it than a wagon-maker would were he to count the cost of the gross materials consumed in the manufacture of a wagon, and think all the money he received for it above the expense of material was profit.

How does a dentist make his estimates when he charges $1.50 for putting one or two grains of gold in a hollow tooth? Does the watchmaker sell a watch by estimating how many grains of gold he has used, and the weight of brass and steel which enters into the manufacture of it?

If we knew better the *actual cost of making photographs*, we could better determine how many sittings we could afford to give A., B., or C., for the purpose of experimenting on dress, arrangement of hair, etc., when we were to receive but three dollars per dozen for the photographs.

I think, if photographers would be more systematic, more particular about little things, think deeper, and be more practical, we would see *better galleries* and *better artists;* our art would be more respected and appreciated by our patrons, and we would be rising upward to a grand height, instead of lowering ourselves and art by putting a low estimate on the work of our own hands.

Ripon, Wis.

OUR PICTURE.

Those who were privileged to attend the exhibition of the Photographers' Association of America, held at Chicago last August, were sure to have their attention arrested, soon after entering the hall, by two remarkable pictures. They hung at the right, in the first alcove, among a lot of beautiful examples of unframed photographs, but always drawing the eye away from their neighbors to themselves. The eye of the photographer was first attracted by the sweet simplicity of the subjects—two young ladies, with "every-day" hats on, free from all the fancy flummeries of fashion—then next by the exquisite photographic qualities of the pictures themselves. They were about 13 x 16 inches in size, mounted on heavy, gilt, bevelled cards, and fastened to the upright without frame or accessory of any kind. There was no effort on the part of the photographer after fancy posing. The backgrounds were plain; the lighting was brilliant—perfectly in harmony with the subjects; the negatives were judiciously retouched, with here and there bits of whites carefully scattered among the draperies; the printing and toning rich and fine.

Face to face these gems hung, the envy, the admiration, and the wonder of all who had the love needed for such work, to understand and appreciate them.

They were from negatives by the President of the Association, Mr. J. F. Ryder, Cleveland, O.; he whose loyalty to the fraternity is well known, and whose motto has always been *progress*.

Often as we entered that hall, so often we turned to these gems of the exhibition for a bit of help and enjoyment from them.

We expressed a wish to Mr. Ryder that *everybody* might see these pictures who had any feeling for his art; but, as that was impossible, would he allow them to be copied and together placed in reduced form before the photographic world through the medium of the *Philadelphia Photographer?*

He, of course, consented at once, with his usual liberality; and they are herewith presented for your enjoyment and study. We trust they may be of great service, and that many will profit by them.

The reductions were made in a similar way to those of "The Fickle Shadow," in our last issue, viz., the prints are mounted with starch-paste upon their faces to plate-glass, care being taken to avoid all lines or marks. The copying is done in a south light, in the usual way. To get the two subjects together was a matter of no difficulty. The black line was secured by removing the film with sulphuric acid, and only a small Robinson trimmer and a proper guide are needed to cut the prints with a neat, clean, turned corner.

With many thanks to Mr. Ryder for his kindness, and congratulations upon his ability to produce such exquisite results, we conclude with a few words upon the paper used for our prints.

It is the "New Rose-tinted Paper" of Messrs. L. Trapp & Co., for which Mr. Willy Wallach, No. 4 Beekman Street, New York, is the trade agent.

These gentlemen say in their circular: "The fact that tinted albumenized papers fade before the light, more especially when exposed to the direct rays of the sun—that they lose, in a short time, their original pink or violet colors, and assume a faded, yellowish appearance—has induced our Dr. Aug. Trapp to seek a remedy against this much-felt defect. After many experiments, he has succeeded in discovering a process which will give to our *new* albumenized paper a *great superiority over all* similar manufactures."

We must congratulate them upon their entire success. We found the ream used for our purpose easy to work, and absolutely unchanging in exposure to the sun. As to the results, we believe we can point with confidence to "our picture."

The editor of the *Photographic News* says he exposed a sheet of this paper to the sun for eight days, without any fading of the tint. Doubtless alizarine, instead of fuchsine, is employed as the coloring element. Here is assuredly one of the discomforts of tinted paper entirely overcome.

The formula issued in a circular by Messrs. L. Trapp & Co. contains many useful hints, and we add it for those who want to "turn over a new leaf" with their paper for 1881.

"It is well known that paper-makers, as yet, have not succeeded, and, in all probability, never will succeed, in manufacturing one sheet of paper exactly like the other with regard to thickness, sizing, purity of the pulp, and glazed surface—circumstances all of which have a considerable influence on albumenizing; and, therefore, it may be hoped that every right-thinking photographer will not raise his requirements higher than the nature of the article permits.

"*Silver-bath,* 1 : 20 (*equal to about six per cent.*), 30 *grains.*

"Dissolve a quarter of a pound of neutral double crystallized nitrate of silver in five pounds of distilled water, and add sixteen grains of carbonate or bicarbonate of soda, dissolved in a little water. The small amount of precipitate of carbonate of silver must remain in the bath to neutralize any traces of free acid, which is the cause of ruddiness; and this process will effectually prevent reddening of the silver-bath.

"Silver-baths which have become red can be discolored in the simplest manner by adding a solution of carbonate of soda, and shaking it well. Even a brown bath may be readily cleared up in this manner. There is no loss of silver, because the precipitate of carbonate of silver is gradually dissolved.

"The silver-bath ought never to contain any acid, and should never be stronger than five per cent. (1 : 20)—at the utmost, eight to ten per cent. (1 : 10)—because a higher percentage easily causes its drying up in drops or oily streaks, furnishing useless copies.

"To retain its necessary strength, add one-third of an ounce of a twelve per cent. silver-bath (1 : 8) for every sensitized sheet. Each sheet absorbs about twenty-two grains of nitrate of silver.

"Floating time, three minutes; and if the bath is stronger than 1 : 10, not more than one minute.

"Drying in a room heated to a moderate temperature of about 70° Fahr. After having removed, by frequent washing, all undissolved nitrate of silver, tone in the following gold-bath, which ought to be prepared some hours before use.

"*Gold-bath for One Sheet.*

"Chloride of Gold, . .	1 grain.
Crystallized Acetate of Soda,	24 grains.
Carbonate of Soda, . . .	3 "
Water, ...	5 fl. ozs.

"To produce a blue tone, the carbonate of soda is omitted, and double the quantity of water taken.

"A bath required for immediate use may be prepared as follows:

"Chloride of Gold, . .	1 grain.
Carbonate of Soda, . .	10 grains.
Water, ...	8 fl. ozs.

"To obtain the favorite brown tone, remove the prints from the gold-bath as soon as they appear red-brown when held against the light.

"After toning, wash the picture several times, and fix in a solution of hyposulphite of soda (1 : 8).

"In winter, all baths should be heated to a temperature of 70° Fahr.

"RULES.

"1. The stronger the toning-bath, and the longer the copies remain in it, the more bluish and the duller will be the tone.

"2. The weaker the toning-bath, the slower the toning is proceeded with; and the copies being removed from the bath at the right time, the more beautiful, the stronger, and the purer will be the tone.

"3. Acid, too fresh or too strong toning-baths, are to be avoided, as they tone too quickly, mealy, and dull.

"4. Alkaline toning-baths are the best.

"5. It is very important, in using our paper, to remove the prints from the toning-bath; when held against the light, they have *the* tone one desires to give them, since in the fixing solution they change but very little.

"6. Weak negatives, even with the best paper, will at all times only yield leaden and dull prints.

"After sufficient washing, dry the pictures on blotting-paper, in a moderate temperature; moisten them again after they are cut; mount while still moist. This precaution is absolutely necessary with our highly albumenized paper, to prevent the albumen, especially on the lower side of the sheet, which always has a higher lustre, from showing cracks. If copies are quickly dried at a high temperature, and immediately mounted, there is danger that fine cracks will show, which are troublesome, although most of them disappear when the pictures are calendered.

"To prevent blistering, wash the prints, after toning and fixing, in a solution — one pound of salt to one pound of water, and add one drachm of liquid ammonia.

"The preceding process is exceedingly simple and very economical. It is founded on large experience in our own photographic establishment, as well as upon the observation of many well-known experts.

"Its principal advantage is that, with a great saving of gold and silver, strong and perfect copies are obtained.

"*Consumption of Silver and Gold.*

"Silver (per quire),	about .	530 grains.
" (per ream),	" .	22 ounces.
Gold (per quire),	" .	18 grains.
" (per ream),	" .	360 grains."

Please study all these matters *well*.

AN ADMIRABLE PICTURE.—The interior of a private parlor and drawing-room has been sent us by Messrs. BROADBENT & TAYLOR, Philadelphia. It is 10 x 12 in size, and was made on a CARBUTT Bromo-Gelatin plate with a MORRISON eight-inch wide-angle lens. The sky was clear—the smallest stop was used—exposure 3½ hours. The longest distance included was thirty-two feet. The lens work is strikingly, surprisingly fine. The dry-plate alone rendered it possible to get such a view, and the photography throughout is admirable.

Editor's Table.

The *Year-Book of Photography*, 1881, will be embellished with a Woodbury print of a copy from a daguerrotype of Daguerre, the father and pioneer of our art.

The editor has very kindly sent us an advance copy, for which we thank him. We shall frame the picture and hang it in our sanctum. Many of our readers will remember seeing portraits from life of Daguerre, and they will especially be glad to secure so excellent a reproduction as is the frontispiece of the *Year-Book* for 1881. Scovill Manufacturing Company, 419 & 421 Broome Street, New York, are the agents for the work in this country, and will be glad to fill all orders.

Mosaics for 1881 is ready, and going off like hot cakes. Here is one extract from a letter in regard to it:

"It is always brimful of good things for those who hunger and thirst for photographic knowledge." S. D. Wager.

The *Photographers' Bureau of Information* comes as usual from Messrs. Douglass, Thompson & Co., Chicago, Ills.

The "Convex Flint Glass Benders" have issued a "United Price-List" for their special goods. The trade have selected Scovill Manufacturing Company for their agents. Circulars and price-lists will be furnished, on application, by the above firm.

We have received from Mr. C. D. Mosher, Chicago, Ills., an invitation to call at his gallery to sit for our picture, which will then be honored with a place in his Memorial Album, to be opened in 1976. We thank the gentleman, but doubt our ability to accept of his kind offer.

Their December, 1880, Price-List of Chemicals comes to hand as usual from Messrs. Charles Cooper & Co., No. 194 Worth St., New York.

S. T. Blessing, No. 87 Canal St., New Orleans, La., sends us his 1881 *Wholesale Illustrated Catalogue and Descriptive Price-List of Photographic Goods, Chemicals, and Apparatus.* The list is in the form of a large pamphlet of 85 pages, printed on fine tinted paper, and profusely illustrated with cuts of the varied stock of fancy goods kept by Mr. Blessing.

It is divided into ten departments, with a paged index, thus facilitating the reader in his search for any special article. The stock contains everything in the line of photographic and ferrotype materials, chemicals, and apparatus, artists' materials, picture-frames and trimmings, velvet and satin frames, easels, etc.; mouldings, albums, scrap-books, chromos, photographs, stereoscopic views, engravings, etc. In fact, this house is prepared to supply its customers with anything and everything needed in photography or the picture business. Send for their catalogue.

We have received a copy of *Christmas Bells and New Year's Calls* (Portland, Me.), in which we find a finely-displayed advertisement of Mr. C. W. Hearn's new gallery in that city. We are glad to see our "young printer" is doing so well, and wish him success in his new departure.

Pictures Received.—Several samples of plain cabinet pictures from Mr. William McComb, Muskegon, Mich. The subject of one — a little miss going to school through a snow-storm—is very pretty. Another snow-picture, representing a young lady in a country lane, comes to us from Mr. E. C. Fryett, with J. H. Steffey, Alliance, O. The photographic work is *good*, and the surroundings most seasonable. From Mr. S. Wykes, Grand Rapids, Mich, two cabinets in the statuary style. A pretty subject, very gracefully posed. Mr. H. B. Hillyer, Austin, Texas, sends samples of his cabinet work. We notice among them a novelty in the way of a mottled border for bust pictures. Quite showy in effect and pretty in texture! From Mrs. E. N. Lockwood, Ripon, Wis., a number of portraits in statuary and ordinary styles. A group of young ladies in a garden is particularly good. From Mr. J. S. Young, Rome, Ga., a card of a fine old Southern gentleman. Very good.

Mosaics's Authors.—We have unfortunately lost the addresses of Mr. H. S. Keller and Mr. A. G. Pittaway. If they will kindly tell us how, we will mail their copies at once.

Artotype Work.—From Messrs. Harroun & Bierstadt, New York, we have received an example of neatness and prettiness which is rarely excelled in photo-mechanical printing.

First, there is a handsome gilt and morocco cover or holder, tied with ribbon at the edge, 4 x 5 inches in size, which contains twenty-nine artotypes, averaging about 2¼ inches square, which are of life groups, illustrating the various acts and scenes in the well-known play of Mr. STEELE MACKAYE, called "Hazel Kirke." Some of the groups have three figures in them, and as they often represent violent emotion, they must have been taken very quickly. The negatives were by Messrs. WELLS & Co., New York, and reflect great credit upon their artistic producers. The artotypes are in the highest style of the art, and the whole "Souvenir" a neat production. The twenty-nine thousand prints required were printed in five days, the edition being one thousand copies.

OUR NEW BOOK is given all the leisure we can spare from other duties. We hardly expect to complete it before next month, if so soon. We want it to be *good* when it does come.

THE P. A. of A. Dry Plate Committee will not be ready to report before next month.

SCOVILL MANUFACTURING COMPANY announce that the scare about the scarcity of Black E. S. Ferrotype plates is groundless. They can supply the whole land.

OUR next issue will be embellished by twelve fine studies in pose and lighting, by Mr. H. ROCHER, Chicago, Ills. A similar dozen studies from negatives by Messrs. MARC & SCHLUM, New York, will be presented about April. Other fine things are in preparation from home and foreign negatives. We must keep them secret for awhile.

A THOROUGH EMULSION number of our magazine will be issued in February—next month. The methods of Dr. VOGEL, Messrs. CARBUTT, CRAMER & NORDEN, EASTMAN, and perhaps others, will be given, together with a thorough *resume* of "the coming process" by one of the best French emulsion workers. Be sure you get it and read it, unless you want to run behind the progress of your art.

THE *Art of Retouching*, by Messrs. BURROWS & COLTON, price, $1, is ready, and will be sent from this office, post-paid. on receipt of the price. Everybody should have it, on the principle that all photographers should read *everything* published pertaining to their art.

OUR COVER OUTLINE STUDY this month is from a splendid portrait by Mr. H. ROCHER. Our engraver has omitted the easel upon which the lady was looking, which rather spoils the composition, but the thoughtful artist will supply an accessory to suit his mind, and be pleased, as well as derive a good suggestion from it.

OBITUARY.—Prof. JAMES C. WATSON, head of the Astronomical Department of the University of Wisconsin, and previous to his accepting that position, Director of the Observatory at Michigan University, at Ann Arbor, died November 23d, 1880. The deceased was in his 42d year, and was one of the ablest astronomers of this country. We were companions at the observation and photographing of the solar eclipse at Mount Pleasant, Iowa, in 1869. Previous to his death, he was engaged in fitting up the Madison University Observatory, which he intended should excel any one of the kind now in the country. The deceased scientist was born in Canada, of American parents. He was a genial man and a most indefatigable worker.

MR. I. W. TABER, San Francisco, California, has sent us a splendid 10 x 13 view of the interior of his photographic parlors. It shows up the excellent taste of Mr. Taber and his skill as a photographer.

MR. HIRAM J. THOMPSON, Chicago, Ills., has sent us some strikingly beautiful photographs of backgrounds, interiors, piazzas, garden scenes, etc., of his own artist's work, which are fine in both design and finish. Mr. THOMPSON says "our artist can produce equal to the best." He supplies photographs free. See his advertisement.

MOSAICS is excellent, and in one little article I have learned enough to pay for it thrice.

W. B. GLINES,
Norwalk, Conn.

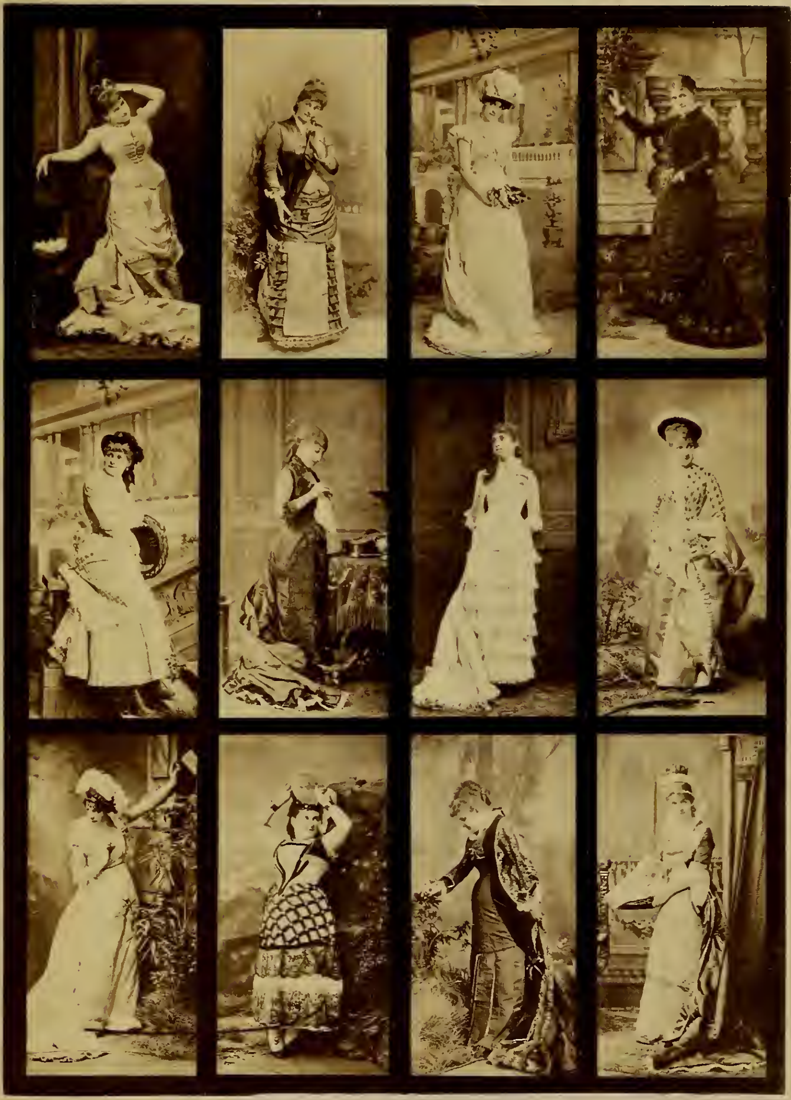
WE are sorry to hear of the sudden death, by drowning, of a son of our friend Mr. E. R. CURTIS, Madison, Wis. We would tender our warmest sympathy to the bereaved parent in this sad affliction.

Two new processes of photo-engraving—one French, one American—will be given in our next issue, with articles and illustrations by their authors. These are real discoveries.

BURNET'S ESSAY ON THE EDUCATION OF THE EYE.—This splendid book, with reproductions of all its cuts, was entirely given in our last volume. We have a few sets only for sale. Act wisely and secure them. $5.00 for whole volume.

BUY our magazine of your dealer, if you can't afford to send for it for a year. Make him get it for you. Buy it; read it.

OUR friends overwhelm us with kind words in renewing their subscriptions. Our pages cannot contain them. Thanks—one and all.



H. ROCHER. CHICAGO.

STUDIES.

Boston Public Library.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

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EMULSION.

Our readers will find that we have made our promise of last month good, by giving them a goodly stock of emulsion information this month. The articles which follow upon this topic will speak for themselves. They include the following: A complete emulsion process from beginning to end, for which a large prize has recently been given in England. Full, practical details for working their prepared plates, by several of the leading manufacturers of them. A timely article on *printing* from emulsion plates. Some "Gelatin Hints," by one whose practical articles are well known to our readers. Report of a Committee on Dr. Vogel's emulsion (which we hope to see introduced in this market soon). The report, finally, of the Committee of the P. A. of A. on the Emulsion Plates of American manufacture. Added to the above is the excellent emulsion letter of Dr. Vogel, who is himself one of the best practical emulsion workers in the world.

With all this material we hope you will be pleased. Do not be misled, however. We do not mean to recommend you to drop all your old methods and at once trust to the new. We only want to place you in position to help in the good that is impending. Undoubtedly, the day is at hand when photographers may give serious consideration and experiment to the emulsion process with reasonable hope of good results. Work carefully, and be patient.

A NEW-YEAR GREETING FROM ITALY.

All of our earlier readers will remember Sig. Ottavio Baratti, who was once a contributor to our pages; the inventor of the well-known dry (coffee) process which grew to be so perfect in his hands, and also the editor of *Monitore de Fotografia*, published at Milan, Italy. He retired from editorial labors some years ago, but that he still has a warm spot in his heart for those who yet have to labor in the chair, is proven by the following letter just received by us, and for which we are grateful, viz.:

Piverone, Italy, December 22d, 1880.

Dear Friend:

I will not let this time pass away without sending you my wishes for a jolly Christmas day, and say that

"Bright as flowers
May the hours
Of the new year glide,
As a flowing tide,"

for you, and for many new coming years, too. The heap of gratitude that I owe to you is growing heavier every day, and I am afraid it will soon excel my strength. How glad I should be if I could find an opportunity of showing to you my thankfulness for your kind liberality towards me, but, until that opportunity does present itself, let me at least express my wishes that you many long be spared to prosecute your useful labors for the advancement of photographic science, and to enjoy in an honorable reputation, the just reward of talents, industry, and integrity of character.

At any event, do remember that you have in this part of the world a very attached and faithful friend,

OTTAVIO BARATTI.

THE PAGET ENGLISH PRIZE EMULSION PROCESS.

SOME months ago Mr. Joseph Paget offered a £50 ($250) prize for the best emulsion process supplied to the Photographic Society of Great Britain. Only four parties competed, and the award was made to Mr. W. Wilson, whose process is printed in the Society *Journal* as follows:

PAGET PRIZE COMPETITION.—DESCRIPTION OF THE PROCESS BY WHICH THE PLATES AND NEGATIVES SENT BY "EBLANA" (MR. W. WILSON) HAVE BEEN MADE:

To make a pint of emulsion: Select a twenty-ounce, narrow-mouth, stoppered bottle, with a well-fitting stopper and thin bottom. Make it perfectly clean.

Make a stock solution of

Hydrochloric Acid, pure (Hopkin & Williams' "Pure 1150 Ordinary"),	1 fluid dr.
Distilled Water, ...	12½ ounces.

Put into the twenty-ounce bottle—

Of the above *Dilute* Acid, . .	20 minims.
Distilled Water, ...	3 fl. ozs.
Bromide of Ammonium (Hopkin & Williams' or Schering's, dry), .	210 grains.
Nelson's No. 1 Photo. Gelatin, .	80 "

Leave for the gelatin to swell, say fifteen minutes or longer.

In another clean glass vessel (beaker, measure, or flask) dissolve 330 grains nitrate of silver (re-crystallized) in three ounces of distilled water.

Pour out about two fluid drachms of this silver solution into another small vessel (say, test-tube), and dilute it to half strength with an equal quantity of distilled water.

Take the twenty-ounce bottle and the two lots of silver solution into the dark-room. The writer prefers to use a large paraffin lamp, protected by one thickness of ruby and one of dark orange glass, or two thicknesses of dark orange paper without any ruby.

In the dark-room have a gas-boiling stove, and on it a tin pot or saucepan deep enough to contain the bottle when the lid is on. It should have a tin perforated false bottom, to prevent the bottom resting immediately on the true bottom; or a piece of wire-gauze will answer. Let the pot contain some three or four inches in depth of *boiling* water.

Turn out the gas of the stove, if alight, and plunge the bottle into the water two or three times, so as to avoid cracking it by too sudden heating; then leave it in for a few minutes, until the gelatin is completely dissolved. Do *not* leave it longer than necessary for complete solution. Take it out, shake up, remove stopper, and set bottle down on table near your lamp, so that you can see what you are doing.

Pour in *all at once* the four drachms of *dilute* silver solution. Put in the stopper and shake up thoroughly, but not too violently, for about half a minute. Now pour in the strong silver solution in quantities of about half an ounce at a time, shaking as before after each addition, and, when all is added, give a final thorough shaking for, say, a couple of minutes.

If the instructions have been so far accurately followed, there will be no coarse precipitate or grit in the finished emulsion.

Now put the bottle into the pot of hot water, see that the stopper is not jammed in, and put on the lid. Light the gas, and boil up as quickly as possible. If the water was previously boiling, and the gas only turned out for the mixing operation, it should boil up in less than five minutes; then keep boiling for *fifty-five minutes.* At the end of this time turn out the gas, take off the lid, take out the bottle, and remove the stopper *at once*, else you won't get it out afterwards. The bottle must now be cooled down as quickly as is consistent with safety to the glass. In very cold weather it may stand on the table for ten minutes or so and then be cooled with water, or in any weather place it in a pan of nearly boiling water, and cool gradually by allowing cold water to trickle slowly in, shaking the bottle occasionally. Whatever method is adopted, it should be down to 90° F. or lower in fifteen or twenty minutes at most. It cannot easily be made *too* cold, as the gelatin has lost its power of setting.

In a glass beaker (about twelve or fourteen ounce size) put one ounce of Nelson's No. 1 Photo. or "X opaque" gelatin, and over it pour ten ounces of clean ordinary water; leave it to soak until the gelatin has absorbed four ounces of the water, pour off the surplus six ounces, melt the swelled gelatin by immersing the beaker in hot water, and pour it into the twenty-ounce bottle containing the cooled emulsion. Shake up well and pour all back into the beaker, draining out the bottle thoroughly. Leave to set in a cool place. The writer prefers to leave for twenty-four hours. It has next to be washed.

For the washing, clean ordinary water at a temperature *not over* 50° F. should be used. The writer prefers *at all times* to use water cooled down to below 40° by melting ice in it. By so doing uniform results are obtained, and where ice can be procured the cost is trifling; three pounds of ice will be sufficient for a pint of emulsion in the hottest weather.

In a glazed earthen pan or other suitable vessel, put about three pints of cold water, and add three ounces of saturated solution of bichromate of potash. (Made by saturating clean ordinary water with bichromate, Hopkin & Williams' re-crystallized.)

Having cooled the beaker of set emulsion down to 40° F., run a bone spatula or paper-knife round and turn out the emulsion, or cut it out in lumps. If cold, it will come out almost quite clean from the glass. Place it on a piece of coarse "straining-cloth" or canvas, and squeeze through the meshes into the water, the operation being performed under the surface of the water. Leave it so for an hour. Lay the straining-cloth over the mouth of another pan, or large jar, and pour the mixture of emulsion threads and liquid on to it, so as to let the latter run through. Squeeze the emulsion a second time through the cloth, into clean, cold water, and immediately repeat the operation a third time, leaving the emulsion in the last water for half an hour. When strained for the last time, place cloth and all in a large beaker, and put the latter into hot water until the emulsion is completely melted and warmed to about 150° F., *i.e.*, not warmer than is pleasant to the hand. With a *clean* hand, take out the cloth and squeeze it; very little will be lost. The emulsion should now measure about sixteen or seventeen ounces. Add two ounces alcohol, and mix thoroughly. The alcohol may be either pure ethylic alcohol, sp. gr. about .830, or *good colorless* methylated. The writer prefers the former. If the emulsion now measures less than twenty ounces, make it up to that by adding clean water.

The emulsion is now ready for use. It should be filtered into the coating-cup through cotton-wool to free from bubbles, and plates coated in the usual way, dried and used as usual for rapid gelatin plates, using about an ounce of emulsion for a dozen quarter plates.

In drying arrangements, avoid the contact of gas or of the products of combustion of gas with the moist plates. The writer finds both to be very injurious.

Exposure.—As usual for good rapid gelatin plates, say Wratten & Wainwright's "instantaneous."

Development.—Either pyro., ammonia and bromide, or ferrous-oxalate. If the former, sufficient exposure, and as little ammonia as possible, will give best results.

[*Note as to gelatin.*—The plates sent were made as above, "X opaque" being used as described. This is necessary in hot weather; but the writer prefers to work in cold weather, and then uses *only* "Nelson's No. 1 Photo." The negatives A and B are from plates made with "No. 1 Photo." only; otherwise, process same as described.]

The following further details and explanations were sent by "Eblana:"

Bromide of ammonium should be as nearly as possible *neutral.* It is usually more or less acid, even though otherwise pure, and frequently becomes strongly acid by keeping. It is then quite unfit for use, and will not give good results unless almost neutral.

Since sending in the formula for competition, the writer has arrived at the conclusion that on the whole it is better to use bromide of potassium. The latter is often alkaline, but may, without much difficulty, be obtained neutral, and is free from tendency to alter.

Nelson's No. 1 photo. gelatin unfortunately varies much in different samples. It should be absolutely free from the faintest smell or taste, and should dissolve clear, bright, and nearly colorless. Samples good for this purpose usually contain a very slight trace of HCl.

Nitrate of silver is usually (if good) slightly acid, with excess of nitric acid. It may be so used, but the writer has recently found that better results are obtained if the silver solution be neutralized with carbonate of soda. A slight excess does no harm, as the resulting trace of carbonate of silver is converted into bromide; indeed, an emulsion may be made by mixing washed carbonate of silver with a soluble bromide.

The uses of neutralizing the silver are twofold. One is, that as the amount of acidity of $AgNO_3$ varies with different samples, it insures the same conditions in all cases; the other is, that the presence of nitric acid in emulsion produces a tendency to green and pink discolorations in the finished negative.

The addition of a trace of HCl to the soluble bromide and gelatin is recommended in formula given, for the following reasons: If the soluble bromide be absolutely neutral, and the gelatin a suitable sample (see *ante*), the HCl is not necessary, and better omitted. If, however, the gelatin be ever so little alkaline, or even apparently neutral, but yet does not dissolve clear, the acid is required. Its use is not to produce AgCl, but to insure a fine precipitate of AgBr. According to the writer's experience, a fine precipitate is hardly at all a question of the method of mixing, and elaborate contrivances for the purpose he considers as quite unnecessary. A fine precipitate is easily obtained, however rapidly the solutions be mixed, if two conditions exist, viz., if the bromized gelatin solution contain a trace of HCl, and the silver solution be not stronger than one hundred and ten grains per ounce. If it be fifty to sixty grains per ounce it may be poured all in at once, or if a little weak solution be first poured in, the stronger may follow (as per formula). A good test for the suitability of a gelatin is to see if a fine precipitate can be obtained without having to add HCl. Too much HCl retards or prevents the conversion of the AgBr into the sensitive form in cooking; a large excess destroys the gelatin.

It will thus be seen that the addition of HCl must be made intelligently, according to the other materials accessible.

It might be supposed that any acid would make the precipitate fine, and that, therefore, acid ammonium bromide would be good. Such is not the case, and, moreover, the acid bromide has in some way a powerful effect in retarding the conversion of the AgBr into the sensitive form.

The proportion of soluble bromide and $AgNO_3$ are very important. Contrary to usual statements, the *larger the excess* of soluble bromide, the more quickly is the AgBr converted; if there be but little excess, a very long cooking will be required; and if exactly the equivalent quantities could be used, the writer believes that no amount of cooking would give the sensitive condition. Too large an excess, on the contrary, produces a form of a tendency to fog, which is not to be afterwards got rid of by the use of bichromate, but which is more liable to occur with alkaline pyro. developer than with ferrous-oxalate.

Hence, the amount of excess bromide must be proportionate to the time of cooking. The writer finds that from 110 to 113 grains of $AgNO_3$ to 70 grains NH_4Br, and from forty-five to sixty minutes' boiling give him best results. If KBr be used, he recommends 86 KBr to 110 $AgNO_3$.

The addition of remaining gelatin, after boiling, should be made when the boiled emulsion and dissolved gelatin are both at as low a temperature as possible, and between the time of this addition and that of washing the emulsion it should be kept as cold as possible. The reason of this appears to be that the excess of alkaline bromide has a most destructive effect on the new gelatin, and, therefore, the lower the temperature, and the shorter the time during which the two are in contact, the better.

There is a curious effect depending on the temperature at which the emulsion and fresh gelatin are mixed, viz., that, if quite cold, the resulting plate will have a mat surface, and the higher the temperature, the more glossy it will be.

A plain solution of gelatin in pure water is very little injured by prolonged boiling, but if an alkaline bromide (or chloride) be added, it is speedily decomposed. Probably the alkaline nitrate which is present in the emulsion in large quantity may be even more effective.

Washing.—Before squeezing the set emulsion through the canvas, it should be cooled down so as to be as firm as possible. If so, the water into which it is squeezed will remain almost clear, or but slightly milky. If the emulsion be soft, even though the water be ice cold, the water will be more milky, and the emulsion take up too much. Too much HCl, excess bromide, too high a temperature of addition of gelatin, or keeping at too high a temperature between adding and washing, will produce the same result.

The emulsion may, of course, be washed by precipitating with alcohol, squeezing the clot, breaking it up and soaking in water; but the writer prefers washing with water and bichromate, as described, on account of the clear and brilliant shadows so obtained.

Remelting the washed emulsion.—A good deal depends on the temperature at which this is done, and by careful management much may be effected. If the emulsion is sufficiently rapid, and free from pink and green disease, it is best melted and coated at a low temperature. If it be slow, and has a tendency to color, it will be improved by heating to 140° F. The writer has had emulsions which became more than three times as rapid by this treatment; but it is a somewhat dangerous one, as too high a temperature, or too prolonged heating, may result in a hopeless gray fog. This kind of fog is more apparent during development than after fixing.

[*Note.*—The gelatin added after boiling must be *dissolved* before adding. If merely swelled and added to the boiled emulsion, the latter being just warm enough to dissolve it, the result is in several ways not so good.]

ROBINSON'S *Pictorial Effect* should be read by every photographer, rich or poor.

PRINTING FROM DRY PLATES, AND THEIR ADVANTAGES.

BY C. F. MOELKE.

HAVING seen no article on printing from dry plates, I will try and give a few hints of my experience.

I am now connected with that prince of photographers, F. W. Guerin, who was one of the Committee on Dry Plates appointed at Chicago by the Photographers' Association of America. Mr. Guerin has, after exercising great zeal and energy, completed and perfected his plates, and exclaims "Eureka," by which name his plates are known. He claims for them *rapidity and uniform development.* I have been printing them for some time, and say you must not expect too much at first. Gentlemen, try them, and *stick;* for "where there is a will there is a way," and that you will be one of the first to succeed, I must not leave my subject, "Printing from Dry Plates."

Print farther or darker than wet plates, and not tone so far as wet plates. The following is my manner of working:

Printing Bath.—Silver, sixty grains to one ounce of water; to this add nitrate of ammonia until the solution indicates eighty grains; make bath slightly acid in cold weather; float from one and a half to two minutes; fume forty minutes.

Toning Bath.—Acetate of soda, one hundred and twenty grains; nitrate of uranium, fifteen grains; water, sixteen ounces; neutralize gold one grain to an ounce of water, also neutralize the uranium.

I recommend Mr. Guerin's Eureka plates to my friends for rapidity and uniform printing qualities. I must exclaim, like all those who have seen them, "Eureka."

It has been stated that dry plates would not stand the heated term of the summer season. I can certify that they will stand the heat, as I have tested the same to my entire satisfaction, having exposed them with the thermometer at one hundred and four degrees in the shade, and they developed perfectly clear, and where a wet plate would fog and dry from the heat.

I speak from experience, as I operated in the South for years. I would like to hear from others on this subject.

Although I am in Mr. Guerin's employ, this article was unsolicited by him.

PHOTOGRAPHIC EMULSIONS.

What They do and How They do it.

Agreeable to the promise made by us in our last, we devote a large portion of our current issue to the interests of what is believed to become the future negative process, namely, the emulsion method. A photographic emulsion, as all must know, is a sensitized mixture with which glass plates are coated, as with collodion. Then they are exposed in the camera, wet or dry, without the use of the nitrate bath. It is the dispensing with the bath and the escape from all the trials and tribulations which it brings, together with saving of time in exposure of the plate, that makes the emulsion method most desirable.

Many and great improvements have been made during the year past. Enterprising parties have taken up the hints given them in the *Philadelphia Photographer* and elsewhere, from time to time, experimented and wrought with them until they are able to secure most admirable results. Several of these have wisely entered into the manufacture of the plates for the trade. This is a great advantage, for it will save a great deal of stumbling and failure on the part of many, and enable all who wish, to make easy progress in this new direction. It is advisable, therefore, that each enterprising photographer purchase and try some emulsion plates previous to adopting their use entirely in his work. It certainly seems now as if we were coming to that—that we shall lay down the dipper and the bath, and work emulsion plates instead.

Of course, the day will come when the manufacturers will supply us a pellicle with which we can all make our own plates more cheaply than now, but the time has not come for that yet. Let us get them already prepared for awhile, until we understand more about their exposure and their development (the greatest drawback to them), and their nature generally, and then we can go into economics, make our own emulsion from the pellicle supplied, and save in the cost of plates largely.

The prices charged by the several manufacturers are pretty uniform, and are not unreasonable, considering the outlay of time and money required to produce them. All of these good people who advertise in our pages supply a good article, and are helping along the good work by their enterprise. It is only just that they should be rewarded. Please refer to their advertisements.

We mean to devote considerable attention to this subject, and now, giving the ball a good start forward, shall keep it going steadily; giving, from time to time, everything that comes up new on the subject of any value to our readers, whom we shall consider hereafter as being all interested.

As a starter, then, we add below, presuming that you have a stock of each kind of plates on hand, the methods given by the principal manufacturers for the treatment of their plates, and a few original hints which will be found useful in emulsion practice. This will enable you to have them in compact and convenient form for constant reference as you work along:

Directions for Working Prof. Dr. H. W. Vogel's Emulsion.

This new emulsion, while possessing the sensitiveness of the gelatin emulsions, exceeds the same by far in regard to *durability* and in *easiness of handling.* And in this respect it is the equal of the collodion emulsion. The plates are coated in the same way as collodion plates; they can be used *wet* (five minutes after preparing) *as well as dry*, and they require only one to one and a half hours for thorough drying.

Intensifying, fixing, washing, and drying take place just as easily as with collodion plates, while gelatin plates necessitate very long washing and require from six to eight hours for drying. Any photographer can prepare for himself dry plates with Dr. Vogel's new emulsion, while at the same time the plates prepared with Vogel's emulsion come cheaper than gelatin plates bought ready-made. An expert worker requires for the coating of a *carte-de-visite* plate, if he gathers the drainings for further use, five cubic centimeters emulsion, which cost only twenty-five pfennings (about six cents).

1. *Preliminary Preparation of the Plates.*—The glass plates require a coating in order to make the emulsion adhere quite fast, and for this purpose a solution of caoutchouc or chrome gelatin is used.

A. *Coating with Caoutchouc.*—Pour twenty-five grammes chloroform over one gramme soft, brown caoutchouc; let the whole stand quiet two or three days, stirring it occasionally, and dilute the solution with eight times its volume of light benzine, and filter through cotton. The solution keeps for months. With this solution the cleaned and dusted plates are coated the same as with collodion; the coating dries in five minutes. The drainings must not be poured back into the original bottle, but have it caught in a separate bottle, to be diluted afterwards with one-eighth benzine, filtered, when they are ready again for further use.

B. *Coating with Gelatin.*—Dissolve one gramme of gelatin in 300 grammes of warm water, filter, and after washing add six cubic centimeters of filtered solution of chrome alum, 1 : 50. The solution keeps from four to six days.

The plates are acidulated, washed very thoroughly under rubbing, and then placed in a cup with distilled filtered water. They are then taken out one by one, a portion of the solution of gelatin is poured on and allowed to flow over the whole surface, when the excess is drained off. (These drainings are *not* used again.) The first affusion drives off the water, and after the same has drained off another coating is poured on, and the plates are placed in a vertical position for draining and drying. In not too cold temperature, they will be dry inside of an hour. In winter, the gelatinizing is done in a warm place, as cold plates do not take the gelatin plates easy.

The coating with gelatin is also very appropriate for wet plates.

2. *The Pouring on of the Emulsion.*—Place the bottle containing the emulsion in warm water of about 40° R., until the emulsion, which sometimes congeals in the cold, becomes thoroughly liquid, and then pour it on like collodion. The substance flows somewhat slower than collodion, and evaporates slower, so that no fears of drying need be entertained in pouring on. The plate may be balanced in the hand, so as to help to produce an equal coating.

While the excess is drained off, turn the plate, but slower than with collodion. When the last drop which had gathered on the corner begins to congeal, place the plate in a vertical position to dry.

The drainings are caught in separate bottles. The preparation takes place in the dark-room, with red light. For draining bottles, collodion bottles with wire neck, which are covered with brown paper, are recommended.

The beginner may meet, perhaps, some difficulties at first, but after one or two experiments he will become quite an expert. In winter, a well warmed room is indispensable.

3. *The Exposure.*—For exposure, light-proof cameras and boxes are required; also, protection of the objective from laterally falling side-light. Time of exposure about one-third of the time necessary for wet iodine-collodion plates. Wet exposed emulsion plates are a trifle less sensitive than dry exposed plates.

4. *Developing.*—For this stage of the manipulation the simple alkaline pyrogallic developer is best adapted, but it is necessary to tone the same according to the temperature and character of the plate. For a *carte-de-visite* plate, 5 x 8 inches, take

Solution of Bromide of Potassium, 1 : 10, ...	1½ to 2	c. c.
Solution of Pyrogallic Acid in Alcohol, 1 : 10, ...	2	"
Water, ...	100	"

Add five or six drops of ammonia, pour the mixture in a cup, and place the plate in it, with subdued light.

If the plate has come wet for exposure, it must have been previously placed in a cup of water from three to five minutes, and rinsed somewhat, then it is placed in the above-mentioned developer, which may contain one or two drops more of ammonia than stated above. With a dry plate, equal flowing over of the developer is of importance, in order to avoid streaks. If the plates incline to form fog, which occurs oftener in high than in low temperature, the addition of bromide of potassium is increased; the same in case of over-exposure. When stronger intensity is desired, take double the quantity of pyrogallic acid, as stated above, and nine or ten drops of ammonia. The picture develops gradually, and its intensity increases more and more. An addition of one drop of ammonia more helps the development.

The ferro-oxalate developer, after Eder, can be used, when eight drops of bromide of potassium (1:10) to 100 cubic centimeters developer are added, but it is liable to work hard. Also, the prussiate of potash developer:

Yellow Prussiate of Potash Solution, 1:4,	50 c. c.
Water,	50 "
Pyrogallic Alcohol, 1:10,	5 "
Ammonia,	12 drops,

can be used, but in most cases the pure pyrogallic acid developer is preferable.

5. *The Fixing* takes place just as rapidly as the fixing of a collodion plate. The plate is put in a solution of hyposulphite of soda, 1:5. In a few minutes it is fixed. Minute yellow dots, which may, perhaps, remain in it, are nothing but bromide of silver left, which is easily dissolved in continued fixing. After fixing, the layer is washed (not longer than a collodion plate). The layer adheres faster to the plate than the gelatin emulsion. Treatment with alum is unnecessary.

6. *Intensifying* is necessary only in exceptional cases. The following mixture is used for it:

Solution of Iodide of Potassium, 1:10,	5 c. c.
Solution of Bichloride of Mercury, 1:50,	5 "
Water,	10 "

This solution is poured upon the fixed and carefully washed plate until the surface of the same shows a distinct greenish-gray color. Afterwards rinse carefully with water. Other intensifiers, even the silver intensifier, may be used with these plates, but the iodide of mercury intensifier is the best; care has, however, to be taken not to let it act too long. It acts even during the washing. Less rapid, but surer, works Edwards' intensifier, as follows:

a Chloride of Mercury, 1:50.
b Iodide of Potassium, 1:10.
c Fixing Soda, 1:8.

And 20 cubic centimeter *a* are mixed with 6½ cubic centimeter *b*, and 6½ cubic centimeter *c*.

This intensifier can now be used also upon the imperfectly washed fixed plate without danger.

7. *Drying and Varnishing.*—The plates are dry in a few minutes, without any help; the varnishing is the same as with a collodion plate. A previous coating with gum and similar substances is only to be used when the glass plates had not been coated with caoutchouc, but were gelatinized.

8. *The Re-employment of the Drainings.*—The emulsion drained from the plate can be used again after having been filtered. Dilute with one-tenth of its volume of a mixture of three-fourths alcohol with one-fourth acetic acid, and filter warm, either through shirting—which has previously been boiled several times in water, in order to get rid of the starch, and dried again—or through a funnel, in the neck of which clean cotton is placed. The latter is rammed tight with a glass rod, which is left sticking in the funnel. Then moisten with the above-mentioned alcohol and acetic acid mixture, and pour on the drainings. By pressure with the glass rod, the filtering can be regulated.

9. *Cautionary Rules.*—Water precipitates the emulsion; therefore, care has to be taken to avoid letting drops of water get on the plate which is to be prepared.

The vessels for measuring and keeping the emulsion must be perfectly dry.

Upon old caoutchouc coatings the emulsion does not adhere as tight as upon fresh ones. The gelatin coating, however, can be used after months, if it is protected against dust. The rough margins of the plate have to be cleaned thoroughly.

REPORT ON DR. VOGEL'S NEW EMULSION.

MESSRS. J. Reichard, J. C. Schaarwächter, and Theodor Prümm report about Dr. Vogel's new emulsion as follows:

Dr. Vogel showed us his emulsion, remarking that the same was two weeks old already, and placed it in the dark-room for a short while in warm water, when he poured it upon a plate which had been previously coated with a layer of elastic gum. The emulsion flowed like thick collodion and was allowed to drip off, which took a longer time than with collodion, when it was placed to dry. In one hour, three-fourths of the plate was dry, in the dark-room, without any other help.

In the meantime, the following experiments were made with plates which Dr. Vogel had on hand, and which he assured us were of the same kind: One of those plates and an instantaneous gelatin plate of Wratten & Wainwright were lighted together for a portrait, in a stereo. apparatus, shortly after four o'clock, exposed ten seconds, and both were developed together with alkaline pyro., after Obernetter. The English plate proved itself to be a little more sensitive than Vogel's; the picture of the former appeared dull and over-exposed, while the picture of Vogel's plate seemed to have had the correct exposure. Both plates were then fixed at the same time. Vogel's plate was fixed at least just as rapidly as a wet one, while the other plate took as much time as usual. Vogel's plate dried after washing in a few minutes, the Wratten plate as slowly as usual. The latter partly got loose in washing, while Vogel's plate stuck tight.

Prof. Vogel showed us also three landscape pictures, which, he said, he had made shortly before, with a somewhat less sensitive emulsion of the new kind. As compared with a simultaneously taken wet plate, the plates of the new emulsion appeared to be about twice as sensitive as wet ones. The pictures appeared stronger, but not of sufficient intensity to be printed without intensifying.

Now, some portrait experiments were made with Prof. Vogel's more sensitive plates. Two plates were exposed fifteen and twenty seconds, in the double apparatus (about half-past four o'clock), one with Eder's developer, the other with pyrogallic acid. The same manipulation was repeated with two plates which were taken at a quarter to five, with twenty-five and thirty-five seconds. It appeared that Eder's developer worked too hard for these plates, and that the same has, in any case, to be toned down. On the other hand, pyrogallic acid produced a thorough alkaline, perfect, very intense negative, which did not require any intensifying. The plates fixed, washed, and dried just as fast as the first experiment, and showed only a very slight film in the shade.

Intensifying experiments were now made, as the landscapes did not yet appear sufficiently intense. 1. A plate, which was already dry, and had been printed, was moistened and floated a few minutes with the following solution: Chloride of mercury, one grain in fifty grains of water; iodide of potassium, one grain in fifty grains of water. The plate assumed, in a short while, the well-known intense color of the iodine-silver intensification, and was afterwards very easily and rapidly washed. 2. Another plate was floated with permanganate of potassa, 1 : 100; in which act it assumed the known yellow color, and the shades remained clear, as in the first plate.

From these experiments the following facts were established: Dr. Vogel's new emulsion flowed like collodion, made in two hours, with about 15° R., ready dry plates, which showed a little less sensitiveness than the Wratten instantaneous plates; but which stuck faster to the glass than those, and, also, had more intensity; which were fixed, washed, and dried much faster, and very easily intensified.

Dr. Vogel remarked that, "The plates, as well as the emulsion, keep unchanged in the hot summer months." But of this, we have, of course, no experience as yet.

Of little defects, we noticed in one plate some few dull, light specks; in another, some streaks, caused by a draught of air in the drying of dry plates.—*Photographisches Mittheilungen.*

DEVELOPMENT OF EASTMAN'S GELATIN DRY PLATES.

THE *Dark-room.*—As these plates are very much more sensitive than wet plates, great care should be taken to keep *every ray of white light* out of the dark-room where the plates are developed. "Copper-flashed" ruby glass should be used in the window or lantern, and it is well to have a thickness of yellow tissue paper over the ruby glass to diffuse the light. It is important to know, that while "gold-flashed" ruby glass is indistinguishable, with the naked eye, from the "copper-flashed," it is worthless in dry plate work, because it fails to stop the green and blue rays of the spectrum, to which the plates are very sensitive. As a substitute for the ruby glass, where that is not to be obtained, common yellow post-office paper (that which shows a dark stain upon the application of sulphide of ammonium) does very well. Several thicknesses may be used, and it may be rendered translucent by a coat of castor-oil. It must be borne in mind, however, that the less the plates are exposed to *any light* the better; hence, when the package of plates is opened, they should be carefully dusted and transferred immediately to the double backs, or light-tight grooved boxes, and *kept in the dark.*

Sometimes a plate can be successfully developed by a light that would otherwise fog it, by using a cover to the developing tray, removing it only when necessary to pour the solutions on and off.

No one should attempt, however, to develop a plate where there is the faintest ray of white light.

Before using these plates for the first time, the camera and plate-holder should be carefully inspected, to see that there are no cracks for white light to enter, and no reflections from the lens mount.

Exposure.—The proper time of exposure can be ascertained by making three or four exposures on one plate, and developing as if only one had been given, when one portion of the plate will generally be found to be correct, if ordinary judgment has been used, bearing in mind the fact that these plates are about ten times as rapid as a wet plate.

Developing Solutions.—

No. 1.—Pyrogalllic Acid,	¼ ounce.
Alcohol,	2 ounces.
No. 2.—Bromide of Potassium,	15 grains.
Stronger Water Ammonia, U. S. P.,	1 drachm.
Water,	1 ounce.

Development.—Lay the exposed plate in a tray, and cover with water for half a minute, pour off the water and quickly flood with

No. 1,	24 minims.
No. 2,	5 to 10 minims.
Water,	1 ounce.

The image should appear in ten or twenty seconds, then five or six drops more of No. 2 should be added to complete the development, by which time everything but the deepest shadows should be well buried. A properly exposed gelatin plate looks over-exposed to the beginner, and a common cause of failure is in arresting the development before sufficient density is attained.

The above formula presupposes a correct exposure. We give further on directions for modifying the development to correct errors of exposure.

As soon as the development is complete, the plate should be washed, and immersed in a saturated solution of common alum for about a minute, then washed again and fixed in a strong solution of hyposulphite of soda, after which it must be thoroughly washed and allowed to dry. Where a negative is to be intensified, it is advisable to defer the alum bath until after that operation. The drying may be accelerated by flowing the plate with alcohol, but heat must not be used. After the negative is dry, proofs may be taken before it is varnished, but care should be taken to have the paper perfectly dry.

Brush off the dust from each plate with a wide camel's-hair brush.

If these plates develop too dense, use less pyro.; if too thin, use more pyro., and add to each ounce of the developer, after the detail is well out, three to ten drops of the following:

Strong Ammonia,	½ ounce.
Bromide of Ammonium,	½ "
Water,	1 "

If the plate is to be intensified, it is advisable to defer the alum bath until after that operation, as there is then less liability to spots.

The negative should be varnished with ordinary negative varnish, or with plain collodion, before any considerable number of prints are made from it, as the film is liable to become stained by the silver in the paper.

It should be borne in mind that the plate must be thoroughly washed or soaked in several changes of water between each operation.

Formulæ for Developers.—We recommend dissolving the pyrogallic acid in alcohol; it keeps well in a *glass-stoppered bottle*, and it is easier to measure than to weigh it out. A *minim glass* should always be used in measuring it, as *drops* of alcoholic solutions are much smaller than aqueous solutions.

STANDARD PYROGALLIC SOLUTION.

Pyrogallic Acid, . . .	½ ounce.
Alcohol, ...	4 ounces.

FOR VIEW WORK.

A.—Ammonia, ...	1 drachm.
Water, ...	1 ounce.
B.—Bromide of Potassium,	. 15 grains.
Water, ...	1 ounce.

Use sixteen to twenty-four minims of pyro. solution to the ounce of water, and commence the development by adding three or four drops each of A and B. If the image hangs back, add two or three drops more of A; while if it appear too quick, add B alone, and then A and B together, to obtain density. A little experience will enable the operator to learn to what extent A can be used to counteract under- and B over-exposure.

INSTANTANEOUS WORK.

A.—Ammonia, ...	1 drachm.
Bromide of Potassium,	. 5 grains.
Water, ...	1 ounce.
Use Solution A, . . .	. 25 minims.
Alcoholic Pyro., as above,	. 16 "
Water, . . . ,	. 1 ounce.

This developer is very strong, and care should be taken not to keep it on the plate long enough to stain the film.

FERROUS-OXALATE DEVELOPER.

Oxalate of Potash Solution, .	1 ounce.
Saturated Solution of Protosulphate of Iron, . .	. 1 drachm.

Add the iron to the potash, and *not vice versa*.

The iron solution can be kept clear by acidifying it with one drop of sulphuric acid to every two ounces of solution.

The oxalate of potash is made as follows: Dissolve four ounces carbonate of potash (salts tartar) in sixteen ounces of hot water in an open dish, then add gradually oxalic acid, until after a thorough stirring the solution tests acid with litmus-paper. Allow the solution to settle, and then decant off the clear portion, making sure it still remains *acid*.

The vigor of the above developer *may* be restrained by the addition of half a grain of bromide of potassium to the ounce of oxalate solution.

The iron should not be added until the developer is to be used.

Where the exposure is uncertain, a portion only of the iron may be added to commence with, but in any case the above proportion should not be exceeded, as the oxalate will only take up a certain amount, which is less if it is alkaline or neutral than if acid.

For Portrait Work.—It is desirable for this class of work to have the developer uniform, and as it is easy to make errors in dropping from a dropping-bottle, we recommend the following:

P.—Alcoholic Pyro. Solution,	. ½ ounce.
Water, ...	. 5 ounces.
A.—Bromide of Potassium,	. 15 grains.
Stronger Water Ammonia,	. 1 drachm.
Water, . . .	. 24 ounces.

Mix only enough of P to last during the day, and use for development equal quantities of A and P, and regulate the exposure to suit the developer.

Intensification.—When a plate from over-exposure, or other cause, requires intensification, use the following: Prepare saturated solutions of iodide of potassium, bichloride of mercury, and hyposulphite of soda. Pour the mercury into the iodide until it retains a red color after shaking. Now add enough of the hypo. solution to dissolve the red precipitate. If the solution refuses to intensify, there is too much hypo. in it; therefore prepare more of the mercury-iodide solution, and use the intensifier already made to clear it up, instead of the hypo. This solution will keep.

The intensifier should be diluted to about half strength, and applied to the plate after fixing, and the plate must be *thoroughly* *washed* both before and after its application.

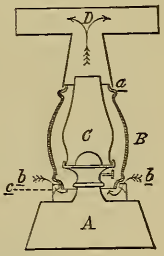
A tray should always be used for developing, and enough developer to fully cover the plate.

A very convenient developing tray can be made of planished copper, tin side in; but such a tray cannot be used for hypo., alum, or intensification.

Failures.—A knowledge of the cause of failures is sometimes useful as an aid in avoiding them, hence we append some of the most common: *Transparent spots.*—Dust on the plate; undissolved pyro. in the developer; bubbles in developer. *Pink film—Purple by reflected light.*—Too much ammonia in developer; development too prolonged; never occurs with ferrous-oxalate developer. *Weak and foggy image.*—Over-exposure; white light in dark-room; reflections in camera. *Weak and clean shadows.*—Under-development. *Strong and clear shadows.*—Under-exposure. *Crystallization on finished negatives.*—Hypo. not thoroughly washed out. *Frilling.*—Failure to use the alum bath. Most of the failures in the use of gelatin plates are from imperfect light in the dark-room, or imperfections in the camera or holder, all of which cause fog more readily on a gelatin plate than a wet plate.

In sending us his formula, Mr. Eastman writes as follows:

"I inclose a copy of our latest edition of directions, and a sketch of a lantern for the dark-room. There seems to be a general want of a proper lamp to develop dry plates by, and the inclosed is simple, safe, and any tinsmith can make it. All that is required is the ruby globe; those used by railroad companies, if deep color, are just the thing. If you could describe such a lamp, or a better one, in your articles, I think it would greatly aid dry-plate workers."



A Lamp.
B Ruby Globe.
C White Common Chimney.
D Tin Chimney.
a Plaster of Paris Joint
b Annular space for Draught.
c Tin Collar to support Globe.

GEORGE EASTMAN.

ROCHESTER, N. Y.

RICHARDSON'S DIAMOND GELATIN PLATES.

GREAT care must be used to protect the plates from the weakest actinic light. Gas- or lamp-light must not be used, nor daylight through orange glass or yellow tissue-paper. The light may be admitted through deep ruby glass, or three or four thicknesses of thick orange paper, made darker but more transparent with boiled linseed-oil. Look out for every chink in the camera or dark-room which can admit white light.

Exposure.—It is impossible to give the exposure definitely, but approximately it should be about the same as wet collodion for the "Standard" plates; one-fifth or one-sixth of that for the "Instantaneous," although there is considerable latitude.

Always dust the plates well before putting them in the dark-slide.

Development.—

AMMONIA-BROMIDE SOLUTIONS.

No. 1.—Strong Ammonia,	. .	1 ounce.
Bromide of Ammonium,	.	60 grains.
Water,	. . . .	½ ounce.
No. 2.—No. 1,	. . . .	1 drachm.
Water,	. . . .	16 ounces.

PYROGALLIC ACID SOLUTION.

Pyrogallic Acid,	. .	1 ounce.
Alcohol,	. . . .	9 ounces.

For each ounce of solution that will be necessary to cover the plate, measure out twenty minims of pyrogallic solution and put in a clean measure. Having placed the plate in a clean flat dish, add to the pyro. the necessary quantity of ammonia-bromide, No. 2, and pour over the plate. Air-bubbles should be removed with the finger. If the plate has been properly exposed, the image will soon appear; but if it appear too slowly, indicating under-exposure, add for each ounce two or three drops of ammonia-bromide, No. 1. If the plate is over-exposed, pour over it a twenty-grain solution of bromide of potassium, and continue the development to gain intensity. Push the development till the shadows are well covered, wash well, and fix.

It is better to over- than under-expose, as the development may be controlled by additional bromide. The developing solutions keep indefinitely if well corked, but should be mixed only just before use, and the tray and measure carefully washed out after each plate.

The gelatin surface may be roughened with cuttle-fish to give a tooth for retouching.

Fix the plate in hyposulphite of soda solution about one ounce to ten of water. The fixing solution for paper prints may be used. It should be renewed when much discolored. The fixing must be done in the dark, and continued two or three minutes after the bromide appears to be all dissolved. Neglect of these precautions will cause yellow stains. If the image now appears too weak, it may be strengthened to any extent with the following:

Intensifier.—Dissolve ten drachms of iodide of potassium in ten ounces of water, and pour it gradually into ten ounces of saturated solution of bichloride of mercury. A scarlet precipitate is first formed which is gradually dissolved by the iodide. A sufficient excess of mercury should be used to leave a slight precipitate. Then add one ounce of hyposulphite of soda. This solution should be diluted with about three parts of water for use, and strengthened from the stock solution as required. Pour on and off till the picture appears sufficiently strong, but as the color is very non-actinic be careful not to over-do it.

Dry without heat, and try a proof. If found too intense, place in the hypo. for a short time till sufficiently reduced; if too thin, wet in a tray of water, and use the intensifier again.

Retouch with lead-pencil on the gelatin surface, then varnish with any good hard varnish.

Should there be any signs of frilling at any stage of developing or fixing, which will rarely or never be the case with these plates, flood the plate with a saturated solution of alum, wash well, and proceed.

Trays for developing may be made of ordinary back-board, nailed with small finish nails, and covered inside and out with a composition made by melting together equal parts of yellow beeswax and common rosin. Trays and measures should be rinsed out after developing each plate.

Care must be taken to wash the plate very free from the hypo., and for this purpose it is well to immerse the plate for a few minutes in a saturated solution of alum, after the washing, which will decompose any hypo. remaining.

The following is a better mode of intensifying: Flow the plate with a twenty-grain solution of bichloride of mercury till the intensity appears right; wash well and flow with ammonia, about one part to ten of water. Repeat, if necessary, with thorough washing. A yellow or brown discolorations of the film under the mercury indicates the presence of hypo.

C. F. Richardson.

Wakefield, Mass.

Newton's View Emulsion.

Cleaning *the Glass Plate.*—Lay the glass into a dish containing commercial sulphuric acid; let it remain in the acid four or five hours, take out each plate separately, rinse and rub with a rag, again rinse and wipe dry with a clean towel. Into a vial put enough talc to fill it one-third, then fill up with alcohol. With a piece of cotton flannel rub some of the talc solution over both surfaces of the glass, and wipe them with another piece of flannel. Dust on the plate some dry talc, which rub well over the surface of the glass, using a piece of cotton flannel for the purpose; now wipe the glass thoroughly, sides and edges, and place it away out of the dust until wanted to

Flow with Emulsion.—This must be done in the dark-room. Twenty to thirty minutes before using give the bottle of emulsion a good shake, in order to get any precipitate there may be into suspension, then allow it to rest during the interval. When the plate is flowed with the emulsion, and the film is set, place the plate in a dish of the preservative, leaving it until the oily lines have disappeared; then remove, wash, and set it up to dry. The prepared plates are placed in negative boxes, and kept in a cool, dry, and dark place until ready to use. *All these manipulations must be done in the dark-room.*

Exposure.—About the same as for a bath-plate. Always expose for the heavy shadows, the high-lights will take care of themselves. It is better to over-expose slightly than to under-expose.

Developer for Dry or Wet Emulsion Plates.—

STOCK SOLUTION.

Water, ...	10 ounces.
Yellow Prussiate of Potassa, .	1 ounce.
Sal Soda, ...	100 grains.
Bromide of Ammonium, .	15 "

If the development is too energetic, or has a tendency to fog, half a grain more bromide of ammonium may be added to each ounce of developer.

In the dark-room the exposed plate is removed from the holder, and washed under the faucet for a few moments to remove the preservative, and open the pores of the film for the developer. Then pour into the developing cup sufficient of stock solution to flow the plate. (For a five by eight plate, half an ounce is sufficient.) Into this put, just as you are ready to flow the plate, one to four grains of dry pyrogallic acid. Flow the mixture over the plate, letting it rest there, and the image will make its appearance and the developing go on. Pour off the developer into the developing cup, and the action of the air on the plate will have an accelerating influence. Flow the developer off and on until all detail is out. If any one spot seems to develop slower than the rest, let the developer strike that spot first when flowing the developer, and then spread over the plate. If more intensity is required, add to the developer a little more pyrogallic acid. The development being complete, wash the plate thoroughly, then fix.

Fixing Solution.—

Water, ...	16 ounces.
Hyposulphite of Soda, . .	4 "

The fixing may be done in a dish, or the soda solution flowed over the plate from a bottle. Keep the plate under the action of this solution until all the milky whiteness on the plate is dissolved out, then give the plate a good washing and set up to dry. When dry, varnish the plate to protect the film.

Remarks.—Bromide in the developer is the restraining agent, and prevents fog; too much of it will destroy the details in the heavy shadows.

Under-exposed plates require the full strength of the developing solution, with less bromide of ammonium. If under the above treatment the developing lags, add to the developer a drop or two of the following solution:

Water, ...	½ ounce.
Liquid Ammonia Conc., .	½ "
Bromide of Ammonium, .	15 grains.

Over-exposed plates require stock solution, reduced a quarter, third, or half with water, according to amount of over-exposure—at the same time more bromide of ammonium must be added to the developer. After fixing a negative, the hands must be well washed before another plate is handled, as hyposulphite of soda coming in contact with an unexposed plate will cause it to fog.

In changing plates from the boxes to the holders and back again, also during development, be sure your light is non-actinic. A dry plate placed back of a negative in a printing frame, and exposed to the flame of a kerosene lamp, at a distance of twelve inches, will require but ten seconds' exposure in order to develop a transparency. This will show the sensitiveness of the plate to actinic rays. When the developer is on a plate, it is far more sensitive than before.

Time, patience, and money are saved by giving a plate three or four different exposures, pulling the slide out a short distance after each exposure. The developing of a plate so exposed will give a better idea of the amount of exposure and development required than anything that could be done.

The emulsion plate can be exposed while in the wet state, as follows:

When the plate is flowed with the emulsion, which should be done slowly, and the film is set, place the plate into a dish of clean water, leaving it until the oily lines have disappeared; then remove, place in the holder and expose, after which the plate must be immediately developed. If desirous of working quicker, proceed as follows: After the plate is taken from the water, drain it, and flow over the surface the following solution:

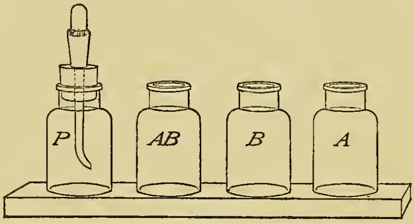
Water, ...	12 ounces.
Sal Soda, ...	180 grains.
Bromide of Ammonium, .	2 "

Then place in the holder and expose.

SCOVILL MFG. Co., *Manufacturers*,
419 & 421 Broome St., New York.

PYRO. DEVELOPMENT OF GELATINO-BROMIDE DRY PLATES, BY J. CARBUTT.

AFTER a lengthened experience in the developing of gelatin dry plates, having had to develop a great many, of which I had no correct data as to what exposure the plates had received, I have become convinced that the method of adding the ammonia and bromide by degrees to the pyro., is better than adding a nearly or full dose at once, and recommend the return to the use of the dropping-bottle where there is any doubt of the right exposure. No doubt, there are many with myself who have experienced the annoyance of these handy little aids to dry-plate work getting out of order at the time they are most likely to be wanted. I allude to those having a rubber cover over the cup-like top of the dropping-tube, which so soon gives out, and of having to pick them up to release the stopper, taking up time at a critical moment. To avoid all of these annoyances, and to insure the right bottle being in its right place when wanted, I have devised what I call a "developing cruet," and which any one can construct for themselves. I take four one-ounce wide-mouth bottles, such as the iodides and bromides come in, fit them with fine smooth corks, long enough to enter the neck half an inch, and project about the same; prepare the corks by immersing them in melted paraffin for a few minutes, remove, and wipe off the excess; bore a hole through them that will allow one of the straight glass dropping-tubes, with rubber nipple (to be obtained of any druggist), to be fitted to each, so as to reach within a quarter of an inch of the bottom, and your dropping-bottles are complete. The paraffin allows the cork to be easier removed, and prevents the absorption of the fluids and consequent swelling of the cork. To insure against their being misplaced when wanted, I arranged them on a base of wood 3 x 9 x ½ inch think, with countersunk holes one-half inch apart to receive them; cement them in their places either with melted shellac or pitch, or thick varnish; letter each bottle with any black color that will not wash off, with letters to indicate their contents; then screw down the base in a position to be within easy reach of the developing-trough.



The cut will explain the "cruet" when finished.

P contains concentrated pyro. solution.

Pyro., ...	1 ounce.
Glycerin, ...	1 "
Water, ...	3 ounces.
Alcohol, ...	4 "
Wood Naphtha, ...	1 ounce.

A B contains ammonia and bromide.

Concentrated Ammonia, . .	1 ounce.
Bromide of Ammonium, . .	60 grains.
Glycerin, ...	1 ounce.

B contains plain bromide.

Ammonium or Potassium Bromide,	120 grains.
Water,.	2 ounces.

A contains plain ammonia.

Concentrated Ammonia, . .	1 ounce.
Glycerin, ...	1 "

The dropping-bottle need only be kept about half full for use, replenishing as occasion requires.

In a glass-stoppered bottle mix one ounce of P with twenty-one ounces of water, and label pyro. developer, which will be about two grains to the ounce.

To develop a plate, say one of 5 x 8 size, measure out three ounces of pyro. developer, lay the plate in a shallow, black tray, and pour over it the plain pyro.; into the measure drop three drops of A B, return the pyro. to the measure and back over the plate; if in fifteen or twenty seconds the image appears, and that slowly, at once drop into the graduate three drops more of A B, and mix the developer with it as before, and return to the plate; if the plate has had the right exposure it will continue to develop with an even pace, and when the shadows are just grayed over, stop developing, rinse off with cold water, and, if temperature is high, place in a saturated solution of alum for from one to two minutes, then rinse and place in a fixing solution of hyposulphite of soda one part, and water six. When fixed, wash for about same time as for a collodion negative, and again place in the alum solution for five minutes, to eliminate the hypo. (I consider the credit is due Mr. John R. Clemons for suggesting the use of alum in photography as an eliminator of hypo.); again wash and dry spontaneously. In case of a plate showing no indication of an image in half a minute, then, instead of adding more of A B, add the same number of drops of A, and a further addition if required, till five or six to each ounce of developer has been added; if this fails to bring out an image, a very rare case indeed, then the plate is under-exposed. Again, over-exposure will be indicated if, on addition of one drop of A B to each ounce of developer, the image starts pretty rapid in eight to ten seconds, in which case to each ounce of developer in the tray add five drops of P, and one to three drops of B, in one corner, and mix with the developer. These are the check-reins, so to say, to hold in check the over-exposure and permit a good negative to be obtained, that with a larger dose of ammonia added at first would have been very difficult to secure.

The foregoing mode of development is recommended principally for out-door exposures. For portraiture, where the light is more under control, two or three drops of A B may be added to each ounce of developer before flowing over the plate; and for known short exposure, five drops of A B may be mixed with each ounce of developer before flowing over the plate.

The above is but a modification of the excellent developer introduced by Mr. B. J. Edwards, and I take no credit for its combination; yet, used as I have indicated, it will, I think, be found to allow more latitude in exposure, give more control over development, and materially aid what we should all strive for,—a good quality of negatives.

John Carbutt,
S. W. cor. Ninth and Arch Sts., Philadelphia, Pa.

Cramer & Norden's St. Louis Extra Rapid Dry Plates.

Precautions.—The more sensitive the plates are the more carefully they have to be guarded against injury by improper light. Nothing but ruby red light should be used for the dark-room, and every trace of daylight must be carefully excluded.

The yellow glass, commonly used, may be covered by a second glass or by tracing-linen or paper of ruby red color. (A red anilin color, called Eosine, dissolved in negative varnish, will answer to paint the muslin or paper.) The red glass, linen, or paper may be put on a frame which slides up and down behind the ordinary yellow glass, so that the yellow light can be used alone for wet plates or together with the red for the dry.

Tablet, camera, and cover of instrument must be perfectly light-tight, and care should be taken to protect the lens from diffused light entering from the top or from the side.

It is better to use a separate kit or tablet for the dry plates, as the least particle of nitrate of silver will cause foggy negatives.

Use separate dishes for developing and fixing, and always keep the graduate and pouring-bottle for the developer and everything else clean.

The time for the exposure of our "extra-rapid" plates is about one-tenth of the time used for wet plates. They are so sensitive that it is advisable to keep them as far from the light as possible during the development, otherwise fog might result.

Alkaline Development.—

1.—PYROGALLIC STOCK SOLUTION.

Alcohol, 95 per cent.,	10 ounces.
Pyrogallic Acid,	1 ounce.

2.—BROMIDE STOCK SOLUTION.

Bromide of Ammonium,	240 grains.
Distilled Water,	10 ounces.

3.—AMMONIA STOCK SOLUTION.

Concentrated Aqua Ammonia,	2 ounces.
Distilled Water,	14 "

These three stock solutions will keep a long time in well stoppered and perfectly clean bottles.

For the developer take two other bottles of different shapes, one marked P and the other A.

P.—	Solution No. 1,	1 ounce.
	Solution No. 2,	1 "
	Water,	14 ounces.
A.—	Solution No. 3,	1 ounce,
	Water,	15 ounces.

These two bottles should be kept in cold water during hot weather, as a higher temperature of the developer is apt to loosen the gelatin film from the glass. The diluted solution of pyro., "P," should not be prepared in larger quantities than what can be used in one or two days, as it will soon turn brown and lose its strength. *None of the solutions need filtering.*

To Develop a Plate —Take immediately before developing one part of P, put it in a wide-mouth bottle, add one part of A, and mix well. (For a plate 5 x 8 inches, one ounce of each is sufficient, for larger plates use more in proportion.) This may be done in strong light. After the developer is ready mixed, and all light, except the red, is carefully excluded, take the plate from the tablet and place it face up in a shallow black rubber dish, which for convenience should be about one inch larger than the plate. For plates of large size, rinsing with water before developing will cause the solution to flow over easily; for small sizes the previous washing is not necessary. Pour on the developer quickly over the plate, and keep the dish in gentle motion. If air-bubbles set on the plate, or if the solution is repelled at the edges, touch the bubbles and pass over the repelling places lightly with the finger-tip, or better with a soft camel's-hair brush. Floating bubbles will do no harm. *In about one minute the picture should commence to appear, in two minutes the leading details must be visible, and in about three minutes it should be fully developed.* Watch the developing of the negative very carefully.

If the picture comes too quickly (from over-exposure), take the plate out of the dish immediately and put it under the tap. Add to the developer one-half or one part more of P, and complete the development. The additional quantity of P will retard the developing and give the desired strength to the picture, thereby preventing flatness, so that the necessity of intensifying afterwards will be avoided. For out-door work, or if over-exposure is to be suspected, it is a good plan to commence with two parts P to one part A, and to add the other one part of A only in case the picture does not appear after one minute, *taking care not to pour the ammonia directly on the plate.* (Pour off the developer from the dish into the bottle which contains the additional one part ammonia, *mix well*, and pour on the plate again.) If not the least trace of a picture appears after one minute (from short exposure), mix immediately a new developer of one part P and one-and-a-quarter part A, pour away the old, and continue with the new solution. This will accelerate the development, bring out the shadows, and prevent the light from getting too much density.

Excess of solution P produces more intensity and clearness, by retarding the development, and works well with full exposure.

If solution A is used in excess, you will get less intensity, and can give shorter exposure to a certain extent, the ammonia acting as accelerator, but too much ammonia will cause fogginess and color the film yellow.

If the negatives appear too thin and flat after they are fixed, expose less, and use more of solution P. If they come too strong, with too much contrast, expose longer.

Use your judgment in mixing the developer. The beauty of the negative depends upon it.

Hardening and Fixing the Negative.—As soon as the deep shadows are full of detail, take the plate out of the developing-dish, wash slightly, and immerse for about one minute in a dish containing a saturated solution of powdered alum in water. The alum solution has the effect of hardening the film, and prevents "frilling." The alum bath, as well as the fixing bath, should be renewed occasionally. After washing, again fix in a dish with hyposulphite of soda, one part to ten parts water. *The plate should be guarded against white light until fixed*, and should not be taken out of the hypo. too soon, otherwise opaque spots and yellow stains will occur.

Be careful to rinse the plate well after fixing, as it is more difficult to eliminate the hypo. from the gelatin film than from a collodion plate, and if any particles of sand stick to the film (from impurities of the water), clean them off by passing over with a tuft of cotton. Washing in a dish, with the water running in, is preferable to washing under the tap. After washing, set aside to dry spontaneously.

Varnish and retouch the same as an ordinary negative, with any good negative varnish.

Intensifying and Reducing.—If the developing was in harmony with the exposure, the negative will need no strengthening and no reducing, and will print well. Take in consideration the color of the film. A yellow color prints much stronger than the more desirable greenish or grayish tint. (You may print a proof before varnishing, as the varnish does not change the density.) If too thin, immerse the plate, after it is well washed, in

Water, ...	14 ounces.
Saturated Solution of Bichloride of Mercury, ...	2 "

Keep the dish in gentle motion to insure a uniform precipitation of the mercury. The color of the negative will change into a grayish tint, and the intensity will be increased gradually. (If the solution of mercury turns milky, it is a sign that the hypo. was not well washed out, and will cause stains.) As soon as the desired density is obtained, take the plate out, rinse well, and put it in a dish containing one-half ounce aqua ammonia to one quart water, and *leave it long enough, until the color has changed entirely to a brownish or black tint.* The ammonia will only change the color, and make the mercury intensification unchangeable by light. The treatment with bichloride of mercury can be repeated if necessary, always using the ammonia bath afterwards.

If you wish to reduce the intensity of a negative, let it dry first, then moisten well, and put it in the following solution: To four ounces saturated solution of bichloride of mercury add four ounces saturated solution of cyanide of potassium, and fill up with water to make thirty-two ounces solution. Watch the negative carefully, and wash when thin enough.

Iron Development.—The iron developer gives very good results, and is preferred by many for its simplicity. Prepare the following two solutions:

Oxalate: Dissolve as much neutral oxalate of potassium in hot water as the water will take up (the proportion is about one to four parts), and allow it to cool. Test with blue litmus-paper; if the color of the paper remains blue, add a little of a concentrated solution of oxalic acid in water, until the paper turns slightly red.

Iron: Make a saturated solution of protosulphate of iron in hot water. Let it cool, and stand until settled. Decant the clear solution, and to each ounce add one drop of sulphuric acid.

For the developer, mix of the two solutions enough for one day's use, in the proportion of one part iron solution to four or five parts oxalate. Add the iron to the oxalate, but never the reverse. The fresh developer is very powerful, and apt to produce flat pictures, but after being used a few times, or by getting old, will soon lose in strength, and develop slowly, with too much intensity. Therefore, the best way to proceed is as follows: Have two bottles of different shapes, but of same size, one for the new and one for the old developer, which bottles should be cleaned once every day. After developing a plate, pour the solution from the developing-dish into the bottle for old developer. Commence to develop the next plate with the old developer which you had saved, moving the dish gently, and if the picture comes out too easily, it is a sign of over-exposure. In this case, add a little water to it; but if after a minute the picture does not begin to appear, pour away a little of the solution, and add some from the fresh, which will bring out the picture clear and brilliant; for very short exposure, throw out the old solution entirely, and finish with fresh.

Wash, fix, and intensify, or reduce the same as described before.

Dear Sir: On your request, we hereby give you, for publication in your valuable journal, the process for working our extra-rapid dry plates, and we have taken great care to write it as complete as possible, with all the details and latest improvements worth knowing, so that any brother photographer can work them successfully, as well as we do in our daily practice. We give the alkaline and the iron developments, as good results can be obtained by both of them.

Wishing the best of success to your journal, and to the dry plates, we remain,

Cramer & Norden.

St. Louis, Mo., January 13th, 1881.

[We regret that the formula for working the Eureka Dry Plate Company's (St. Louis) plates came to us too late for insertion. Next month. See their advertisement.—Ed. *P. P.*]

REPORT OF THE COMMITTEE ON DRY PLATES.

To the President, Officers, and
Members of the P. A. of A.

Gentlemen: In accordance with your wishes, being one of your Committee whom you honored at the Convention, held in Chicago, to test the merits of the gelatin dry plates, I have the pleasure to submit herewith my report.

Before entering, however, upon the report proper, it becomes necessary for me to explain why this report is not a joint one.

In all bodies, where parliamentary rules are observed, it is customary that, when a committee is appointed, the first-named person acts as its chairman, and having received this honor, I naturally inferred that this duty was placed upon me. Not having been able to convene a meeting of the committee in Chicago, I at once saw the difficulty of concerted action by the committee, and, not being a novice in such matters, I know, by experience, that to be chairman of a committee means simply shouldering all the work. After my return home, I at once sent communications to the members of the committee, asking their concerted action, etc. In the meantime, I received letters of inquiries from manufacturers of dry plates, asking when to send the plates, the size wanted, etc. Not receiving due answers from the committee, and finding action was pressing, I used my own discretion in the matter, and announced the notice to the plate-makers in the journals. My subsequent circulars and letters to the committee, asking their opinion, etc., remained nearly all unanswered; but knowing that all were veterans in photography and fully competent to act for themselves, besides seeing the difficulty arising from the inability of comparing notes without a great loss of time, I found a joint report would be almost impossible, and thought best that each member make his own separate report, which fact I have communicated to them, and hence our separate reports.

In closing this explanation, I wish to add that I have no complaint to make whatever, it was simply necessary to explain how the delay of the report occurred and why separate. I hope my fellow committee-men will pardon me if, in my zeal to do my duty, I have the interest of the *whole* more at heart than the individual.

The Report.

It may not be amiss to mention that, before entering upon the test, I first assured myself of an absolute dark-room, also camera and plate-holder, and as I have plenty of good-will in store towards any improvements in our art, and having decided to use dry plates at any rate to some extent, all my preparations, as to red light, etc., were made of a permanent nature; in this way I am ready at all times to work either the wet or dry plates, and I must say that any gallery so equipped need not lose a single customer, be it a fussy child in evening, or one of those "I am in an awful hurry" customers.

Plates were received from Messrs. John Carbutt, Philadelphia, Pa.; D. H. Cross, Indianola, Iowa; Cramer & Norden, St. Louis, Mo. Other plate-makers have corresponded on the subject, but owing to the shortness of the time and other reasons given were not able to send plates.

My first trials were usually made after getting satisfactory results with the wet process of my regular customers; then a dry plate was exposed. It was either developed at once and properly marked, or developed at leisure.

Mr. Cross having, in a letter, given preference to the ferro-oxalate developer, for which he gives a formula, without the necessity of first procuring the oxalate of potash, I developed his plates with this formula. His time given was one-tenth to one-twelfth the time required for wet plates. These plates were in size 8 x 10, and marked "Rapid."

The first I used late in the afternoon, on a cloudy day, after having made a passable 8 x 10 wet negative of a child, figure large, giving twenty seconds. It was a little under-timed. The dry plate was given two seconds, and proved fully timed; in fact a little less would have been better. Not being acquainted with the oxalate developer I over-developed the plate slightly, but on the whole it was a better negative than the wet one. In time all the rest of the plates proved the same. Two were tried on outdoor work, one successfully, slightly over-timed at one-tenth; the other frilled a little at one edge and was covered with small blisters. With proper care this did not occur again. Two were used on double cabinets, the time being two and three, and three and four seconds. In the first the two seconds' exposure was the time required, the three seconds' exposure, on the same plate, was to ascertain the effect of over-timing; the second plate at another time was in the same proportion. Strange to say, the different time in each plate was but slightly perceptible in the negative. I am sorry that this brand of plates was exhausted with the ferro-oxalate developer before I could try the pyro. as I think the texture and the definition, or, in other words, the sharpness in detail, are not quite as good as the other plates developed with pyro. The time having expired for receiving plates, I did not feel warranted to order more for the pyro. test; but the different action of the two developers is, however, understood by photographers.

From Mr. Carbutt I received two kinds, size 5 x 8; one lot marked "Rapid plates," the other "Extra rapid;" the time is given in the former one-half to same time as wet plates, and the "extra rapid" one-sixth to one-tenth.

My opinion is, that if ever the dry plate will take the place of the wet collodion process, more especially in the gallery, it will be the quick-working kind, as rapidity is the great desideratum in the gallery. Consequently, I have taken for the test those marked "extra rapid." Those plates I have developed with the pyro. formula given with the same. After having given a thorough trial to Mr. Carbutt's plates, I received a letter from him stating that he had discovered, with considerable loss to himself, that a lot of plates were spoiled by his employees, part of which I received, and offering to replace those I have used or permit him to withdraw from the contest. Mr. Carbutt gave full explanation, which, to my experience as a gelatin worker, is satisfactory that this occurrence was accidental, and since his letter was received without his having known the result of my test with any plates, I think it just to comply with his wishes, and therefore withhold my report on these plates.

Of Messrs. Cramer & Norden I received a lot of plates, marked "Extra rapid," size 5 x 8; time required about one-tenth. The developer used for these plates was the pyro., not the one inclosed with the plates, but the "improved formula," received later. These plates have proven, in my hand, successful; the time required, however, is a little more than given with the directions; the best result obtained was in one-sixth the time required for wet plates. The only fault I have to find with these plates is that they possess too much intensity; but the good and simple formula given for reducing the negative in such a state rectifies this evil satisfactorily.

The simplicity of the developer and the directions given by this firm are very comprehensible. These plates are remarkably clean and clear of any fog. It is a pleasure to look upon a negative free from spots and blemish.

My reasons for not writing to the manufacturers for information on any fault I have found were several: First, I promised in my circular not to divulge any results before the publication of the report, and, finally, had I invited a correspondence, it might have resulted disastrously; suggestions, new formulæ, likely new plates, would have been offered; in fact, for fear of complications and prolonging our report, I concluded not to do it.

The testing of these plates was by no means a small matter. No two formulæ are alike; each of them consists of several compounds in stock solutions, their readmixtures, etc.; and considering this came just in the busy time, it can easily be understood that the necessary attention paid to these trials was at the expense of something else.

THE RESULT.

We all must admit that a ready sensitive plate in itself is a great desideratum in our art; but, coupling this yet with the advantage of so great a gain in sensitiveness as the gelatin dry plates offer, I firmly believe that, unless something else better can be found, these plates are bound to take the place of the old wet collodion process. Failures will be the result with many beginners, until they will learn that the extreme sensitiveness also requires extreme nicety in working them (allowing, however, a good margin to the manufacturers for improvements). Yet there are problems in this direction to be solved. The principal feature is the enormous price asked for these plates. Think of a gallery averaging only one dozen of negatives per day of different sizes, say, from cards to 14 x 17; the expense for plates, at present prices, alone, will amount to about $2000 per annum, not allowing anything for failures, refused proofs for sundry causes, which are unavoidable. The expense of the glass remains the same, but it is obvious that the cost of the gelatin-bromide of silver coating is less than the collodio-iodide of silver film; then what is the great extra expense? Answer: The labor for making them. If this is granted, then we have to look for a remedy in this direction. I don't wish simply to convey the idea that the manufacturers are charging too much for their time and labor—every man has the right to put his price on his time; but when this extra expense proves to be for labor only, is it not wise to perform this ourselves? The making of the gelatin dry plates is no secret, neither is it the invention of any of the makers; they have simply adopted one of the many formulæ, and may have modified them to some extent to suit themselves; still, they are known formulæ, proven to be reliable. Then what will be the result? simply this, unless the competition will reduce the price of the plates, photographers who will find the benefit of working them, will make their own plates just as well as they make their own collodion, etc.

There is a way for the Photographers' Association of America to take this matter in hand, whereby its life could be perpetuated by making the membership profitable; but, as this report is already so lengthy, I will close here, and hope by this suggestion to have invited some other brother to write on this subject.

In conclusion, I have this apology to make. In undertaking to serve the members of the Photographers' Association of America, we have done the labor to our best ability, unprejudiced by any motive whatever, except the one to do our duty and serve the fraternity at large. Your approval of having done this, will be our reward.

T. M. SCHLEIER,
NASHVILLE, TENN. Chairman.

MR. T. M. SCHLEIER.

DEAR SIR: When I had the honor to be placed on the Committee on Dry Plates, at the meeting of the Photographers' Association of America, at Chicago, I knew very little about dry plates, but being anxious not to hurt, unwittingly, the feelings or the pockets of the makers of the same, I considered it my duty to become fully acquainted with the development, etc., of the plates before I conscientiously could send in my report. This I have done studiously during the last two months, and think to be competent now to judge of the good or bad qualities of a dry plate, and take the liberty now of submitting my report to you.

From the following gentlemen I had received plates: Mr. D. H. Cross, Indianola, Iowa; Messrs. Meyer & Ruthnick, Chicago, Ill.; Mr. John Carbutt, Philadelphia, Pa.; Messrs. Cramer & Norden, St. Louis, Mo. Since Mr. Guerin, of St. Louis, declined to act on this Committee (he making plates for the trade, too, now), he turned over to me some of Mr. Cross's and Mr. Carbutt's, which I have also used in my trials; all the plates, good or bad, I have kept for reference.

Mr. Cross's plates I found very sensitive, and the negatives developed were clear in the shadows, had sufficient intensity at once, and in no instance required intensifying, but (and here comes the but) all his plates would blister. The appearance would be that of a gummed and dried collodion negative when placed under water again.

Besides this drawback, which I could only partly avoid by adding alum to the developer, they would show singularly-shaped markings; some had it so bad that the negatives were quite useless. If I had to produce these markings, I would take a piece of paper, brush over starch paste, place it partly on the face of the negative, and pull it off again. I think it must have been caused by the action of the tannic acid in the substratum of the upper layer of gelatin. I only guess this, as I do not know how Mr. Cross makes his plates. All his plates were rich in bromide of silver, and heavily coated, and took a long time in fixing in the hypo.

Messrs. Meyer & Ruthnick had sent me half a dozen 4-4 plates, which I found exceedingly even-coated, free from spots and defects. They seemed to be a little less sensitive than the other plates; two of the plates had a blue fog after development, which neither hypo. nor cyanide would remove.

Mr. Carbutt's plates proved to be failures in my hands. The developed negatives were flat and inclined to be foggy. Shortening the time of exposure proved no remedy; they all would have had to be intensified if they could have been used, which they could not, on account of the large number of transparent spots, as many as forty on a fifth-eighth plate, scattered all over them. They also had a tendency to frill. The coating of gelatin was thin, and they were freed from the bromide of silver in a very short time in the hypo. Some plates made by Mr. Carbutt, and obtained from him over six months ago, were a great deal better than these.

Messrs. Cramer & Norden had sent me some 8 x 10 and 5 x 8 plates; of the latter size, two different kinds, one being very sensitive, requiring only one-tenth the time of exposure of a wet plate.

I may state here, that in no instance, except with the very sensitive Cramer & Norden plates did I obtain a full-timed negative in less than eight to ten seconds of a person, while on some machinery I had to expose over twenty minutes, owing to bad weather and the dark color of the object. On the Cramer & Norden plate I took the finest negatives of all. The plates were very evenly coated, free from spots and markings, show no tendency to blister or frill, and the resulting negative looks brilliant and rich. With the very sensitive plates the picture came out less brilliant, and inclined to show fog; the use of a little more bromide in the developer remedied the latter defect; still, I did not like them so well, and I would therefore advise beginners to leave the extra-sensitive plates alone until they have gained more experience in developing, etc.

In making these comparative trials I used the pyrogallic developer, and Messrs. Cramer & Norden's formula, as last published, is a very reliable one. After developing a few plates, and keeping in mind what gives intensity and what flatness, etc., a beginner will soon learn to control the effect.

I will not omit to make mention of an experiment I made to find out the relative sensitiveness of the dry and wet plates to different colors. I procured to this effect a cylinder of wood about five inches in diameter, pasted around this strips of colored paper, upon which I had written in black the name of the color and other marks and lines. This I placed upon a black cloth, and took two negatives of it, one on a wet, the other on a dry plate. By placing it on a dark piece of cloth I avoided any reflection of light, and was enabled to follow the writing down into the deepest shadow. The result surprised me, as, for instance, the yellow and orange-colored paper came out with equal intensity in both plates; the difference was almost nothing. I am not quite satisfied, though, and shall make a few more trials, with very short and long exposures, and note results.

Now, before I conclude, I will ask and answer a few questions in regard to dry plates, and if others differ in these opinions from mine, I would like to hear from them through the journals.

Question.—Will gelatin negatives last as long as collodion negatives? *Answer.*—No. Gelatin plates require a very long washing to free them from their salts, and few operators would care to wash their plates for fifteen or twenty hours. Collodion plates crack and peel; why should gelatin not do it more so?

Question.—Will it be more economical to use dry plates than wet ones? *Answer.*—Yes, provided the makers agree to replace faulty plates by good ones. This may be inconvenient, and not very practicable, but have we not a right to expect good plates for our good money? And provided, secondly, they be used for what they are most eminently fit, viz., the taking of children's groups, nervous people, landscapes, etc.

Question.—Will the fraternity adopt them very readily? *Answer.*—No; because it takes a process-vender to introduce a new thing; and, secondly, the many failures the inexperienced will meet with, owing to the many indifferent and bad plates sent out, will scare them back to the old and well-understood collodion process.

Now, Mr. Schleier, with the wish and hope that something better than gelatin be discovered, and may take its place for preparing dry and rapid plates before long, I will conclude this my report on dry plates.

Yours, very fraternally,
R. BENECKE.

ST. LOUIS, MO., December 15th, 1880.

DEAR SIR:

As one of the committee of the National Photographic Association on dry plates, I hereby tender you for publication my report on such of them as I have tried.

I have tried plates manufactured by Mr. Cross, of Indianola, Iowa; Mr. Carbutt, of Philadelphia, and Messrs. Cramer & Norden, of St. Louis. The plates of Mr. Cross work very well with the oxalate developer, but when treated with the pyro. developer frill and fog. Mr. Carbutt's plates have a great many spots, and work too intense. I received a new lot from him some two weeks ago; they work considerably better than the first, but still lack the softness and bloom of a wet plate. The plates of Messrs. Cramer & Norden I believe to be the desirable ones; they work well, develop easily with either the oxalate or pyro., and give soft and brilliant effects. These plates are equal in every particular to wet plates, and work, as do all the different manufacturers' plates named, in about one-sixth time.

Respectfully, E. KLAUBER,
Of Committee.

Photographers' Association of America.

GENTLEMEN: In tendering my report on dry plates, I beg to say that I have tried them side by side with negatives made in a bath in the usual manner, and in many cases the negatives made on gelatin dry plates were better than those made with the collodion and bath, and in some cases they were not as good. My duty, as I understand it, is to point out the difference, as far as I can discover, and let photographers judge which has the most merit.

Plates were furnished by John Carbutt, Esq., of Philadelphia; Messrs. Cramer & Norden, of St. Louis, Mo.; and Mr. D. H. Cross, of Indianola, Iowa.

The subjects treated were portraits from life, views from nature, objects of merchandise, copies from oil paintings, and copies from engravings and crayon drawings.

In all cases, the negatives were made through small diaphragms in order to permit an accurate measure of time of exposure. The negatives were all made for artotype prints, *i. e.* reversed, either by means of a reflector or by exposing through the back of the plate. The average length of exposure in all cases was one-eighth of the time required for wet collodion plates, made at the same time.

In portraits, I can see no difference in the quality, whether made with the dry plate or wet.

In landscapes the same qualities exist, except when the camera is pointed towards a strong light; in such cases the bath plates are less blurred or solarized. Otherwise than this, the gelatin plates are more desirable.

In copying from engravings or crayon drawings, I consider the gelatin superior to collodion.

In oil paintings, also, I find the dry plates better, as it enables one to expose in the same quality of light as that in which the picture was painted, which I have seldom been able to do with any other process.

In objects of merchandise, I think them so good that we will use them largely in our regular business.

These tests were made with special reference to the merits of gelatin as a substitute for collodion, in negative work, rather than the quality of one brand of plates above another, but with more experience good results can undoubtedly be obtained with almost any brand.

All three brands tried were free from spots, and the pictures responded promptly to the developer.

The "Keystone" brand made negatives of the right strength and free from imperfections, without further treatment than simply developing, and fixed readily in the hypo.

The "St. Louis" brand made fine, brilliant negatives, free from blemishes, but if left in the developer too long they became too intense. They fixed as readily as the first. The "Indianola" plates came up well under the developer, but some were lost by frilling, owing, probably, to the softness of the gelatin; a few trials enabled me to prevent this in a measure. These required twice as long time in fixing as the others.

It must be remembered that perfect success in managing gelatin plates comes only by experience; like all other processes, it must be learned. A beginner will very likely expose too long, or have too much light in the dark-room, over-develop, or make many mistakes that experience alone can cure; but after passing through as many failures in gelatin as every good photographer has done in collodion, he will become so familiar with it that he will find it one of the most valuable improvements that has been made in photography.

E. Bierstadt.

New York, January 2d, 1881.

GELATIN HINTS.

BY C. F. RICHARDSON.

Use *of Alum.*—Alum has been used much in working gelatin plates, but hitherto simply to harden the film and prevent frilling. But recently it has been found that alum removed the traces of hypo. which appear to escape the usual washing. It is therefore well to immerse the plate in a saturated solution of alum, after fixing and washing well. The *British Journal* advocates intensifying with silver and pyro. after the use of the alum; but it is best not to be too sanguine of silver intensification even after alum, as the mercury and ammonia method is simple, and gives permanent results, and there is at least a liability of the silver combining with the gelatin and bringing about a gradual discoloration.

Intensifying.—In my article in *Mosaics*, I recommended cyanide of silver for blackening the image intensified with mercury. I now find that a solution of ammonia, about one part to ten of water, serves as well, and is less trouble. The intensifying, therefore, now stands as follows: Treat the plate with a twenty-grain solution of bichloride of mercury till the intensity appears right, then wash, and apply dilute ammonia to blacken the mercury image. The color of the image resembles wet plates, and appears to be permanent.

Some writers have advised to apply the mercury until the plate is whitened. This may be necessary in some cases, but the whitening is not the best indication, since, if the original image was rather intense, the intensity would be too great if whitened. Judge of the intensity under the mercury just the same as you would of a wet plate.

Subscribe for the *Philadelphia Photographer.* "The best." $5.00 a year.

GERMAN CORRESPONDENCE.

Progress in Emulsion Work—Iodide in Emulsion—Preliminary Coating of Emulsion Plates—Intensifying and Keeping Gelatin Emulsions.

The gelatin process grows daily more interesting to the photographer and chemist. It looks as if people were trying to gradually ignore collodion altogether, although it is certain that among one hundred photographers only five work with gelatin plates, or rather with emulsion plates, for gelatin alone is not used any more since I introduced my new emulsion.

We had very dark days all the latter half of last year. I was often forced to light my lamp at noon-time, and there is no doubt that, but for the highly sensitive plates, our photographers would have had no other choice than to turn away three-fourths of their customers. The gelatin plates, or rather emulsion plates, consequently, get more into favor every day. Defects, of course, they possess, but certainly not more than collodion plates, and science is working all the time to clear up the, as yet, insufficiently understood principles of the process.

Some months ago, Captain Abney recommended the addition of iodide of silver to the bromide of silver for emulsions, laying stress on the statement that thereby the emulsion became less liable to form fog, and less sensitive to red light, so that one could work in the dark-room with the brighter orange-color light. Dr. Eder declared these advantages to be not of material importance; while, on the other side, the iodide was detracting very much from the sensitiveness.

The controversy has of late extended to larger circles, and both scientists have expounded their views in regard to the subject in lengthy articles. Captain Abney published the results of a number of experiments, which proved that the statement of Dr. Eder is borne out by facts in certain cases. He obtained with brome-iodide of silver, in two comparative experiments, an emulsion less sensitive than with bromide of silver. In two other experiments the results were equal. On the other hand, it appeared that, by keeping the gelatin emulsion in the presence of iodide of silver, the sensitiveness increased materially, but less so in the presence of bromide of silver. In this way, the experiments prove both gentlemen to be right in their views.

I must state here, that it is extremely difficult to make comparative experiments with the gelatin process, and I incline to the belief that no two tablets in the same packet of gelatin are of the same quality. In order to be perfectly sure in comparative experiments, it would be necessary to make a large quantity of gelatin solution, and to use the same in all experiments.

In regard to the sensitiveness of the brome-iodine-silver gelatin to the red light, I have, myself, made some experiments, and found the observations of Captain Abney corroborated. It is a fact that one can work with it in the dark-room in a materially brighter light than with a bromide of silver gelatin plate, which is certainly an advantage most agreeable to the practical photographer. On the other hand, many experiments have convinced me that the presence of a little iodide of silver does not detract materially from the sensitiveness. I succeeded in obtaining, while using a small quantity of iodide of silver, as high a sensitiveness as with bromide of silver alone, and I now always use a small quantity of iodide of silver in my emulsions, as the practical photographer is used to work in pretty light dark-rooms. I must remark, however, that caution is nevertheless necessary. The direct light of the gas-lamp, the highly sensitive dry plates *cannot* stand. It is well to cover the lamp with a screen of brown paper, which lets much more light penetrate than a red cylinder, without having an injurious effect upon dry plates.

Speaking of emulsion plates, I may as well mention a simple method of intensifying given to me by Mr. Traut, of Berne. The method consists in treating the developed, fixed, and washed plate with a solution of one part iodine and one part iodide of potassium in one hundred and fifty parts water, in which operation dark subiodide of silver is formed. If a very high degree of intensity is desired, as in reproductions, it is better to employ a stronger solution of iodide (two parts iodide, two parts iodide of potassium, in one hundred parts water), and to let the plate lie in it until it has become quite yellow, when it is washed, and treated in the daylight with the usual pyrogallic intensifier and silver. The detaching of the emulsion layer from the glass is best prevented by a preliminary coating with, for instance, caoutchouc. For plates, however, which require to be longer intensified, a gelatin sub-coating is preferable to the caoutchouc sub-coating. The white or black spots sometimes appearing in the gelatin sub-coating are easiest avoided by squirting on the plates with distilled water before coating with the gelatin. Besides the preliminary coating with gelatin, recently another, with albumen and water-glass, has found much favor.

Mr. Schaarwachter said about the latter, in the Photographic Society here, that neither with the chrome-gelatin nor with the caoutchouc sub-coating did he obtain satisfactory results, as the layer became easily detached. By using, however, a water-glass sub-coating, he avoided that defect. The combination is as follows: one part water-glass, five parts albumen (*i. e.*, the white of an egg beaten to foam), to three pounds of water. Potash or soda water-glass seems to have the same effect.

About the expedients to render gelatin emulsions durable, Dr. Eder recently published the following facts: "Dr. Székely found that all the emulsions treated with thymal or salicylic acid became liquid in the course of the summer. Captain Troth and I observed that all the samples treated with thymal or salicylic acid are much more durable than those without that addition; while the latter, in mid-summer and in a warm place, became liquid in three days, the former kept from six to eight weeks; but after that the gelatin emulsion became totally liquid in the high temperature, in spite of the antiseptic. Nevertheless, the employment of the antiseptic is very recommendable, because it will enable one to work at least some weeks with the watery emulsion without fear. Absolute security against putrefaction is only obtained by keeping the gelatin emulsion in a dry condition.

Haack finds the effectiveness of the thymal yet more favorable, namely, sufficient for some months. Dr. Heid, also, observed that gelatin emulsion, treated with thymal or carbolic acid, remained unchanged for three months in summer, while emulsion treated with salicylic acid became liquefied. This proves the effectiveness of the salicylic acid to be less, as compared with that of the other two substances; and this fact further agrees with the statement of Dr. Fleck, according to which benzoic acid and carbolic acid have more antiseptic qualities than salicylic acid. Mr. Muller, too, found that the salicylic acid could not always replace the carbolic acid for practical purposes. It may finally be stated that carbolic acid is in fact the most powerful antiseptic, fully the superior of thymal, the consumption of which decreases because it costs more and is less effective.

Very truly yours,

Dr. H. W. Vogel.

Berlin, January 1st, 1881.

FRENCH CORRESPONDENCE.

The Selenium Photometer.

In regard to special appliances, rapid stops and photometers have attracted most attention here lately. Stops, principally, have been the object of numerous experiments. They were one of the immediate consequences of extra rapid plates. Up to the present time, notwithstanding many interesting communications, there yet remains to be discovered an instantaneous stop, measuring exactly the length of exposure, easily carried, and of simple construction. In regard to photometers, new ones have been discovered, and that of Mr. Warnerke, based upon the glimmer, more or less strong, of a phosphorescent substance, is still the most ingenious and original that has been constructed.

Those with oxalate of uranium, with perchloride of iron and oxalic acid, etc., do not indicate the lighting power, but the amount of chemical action produced by a luminous source in a given time. Although imperfect, they are useful instruments, but they are not true photometers. This brings us (as we must, of necessity, sometimes speak of our own modest experiments) to say that the photometer that we had imagined, may really exist. The dream has just appeared to us under the form of a charming reality, and the idea of making this instrument was suggested by the description of the photophone of your illustrious countryman, Mr. Graham Bell.

The property that selenium possesses, when treated in a certain way, of being to a greater or lesser degree a conductor of electricity, according as it has been acted upon by a more or less intense light, would necessarily lead to the construction of a photometer based on this action, which is entirely physical.

Mr. Warner Siemens conceived the idea, and has mentioned a photometer of this kind, having for object the comparison of luminous sources of different degrees of intensity. But the true photometer, one capable of indicating at each moment the variations of the lighting power of the sun, when it shines in all its brilliancy or when it is obscured by thick clouds or thin mists; the photometer, analogous instrument to the thermometer, which at each moment marks the degrees of temperature without undergoing any modification, save a physical action, this appliance, we say, did not exist until we created it.

It is so constructed, that at a simple glance we can judge of the degrees of light at the moment of observation; a needle, oscillating on a dial, marks this degree as the needle of a dial-barometer indicates the atmospheric pressure. The O of the graduated dial corresponds to obscurity, that is to say, to the position of the needle when the selenium is in entire darkness. Starting from the O, according as the needle deviates more or less, it is possible to read the degrees in succession. The effect is instantaneous and continuous. As soon as a cloud passes over the brilliant sun, a return towards the O is made, and the needle stops at a lesser degree. Should the sun again show itself, at once the needle springs towards its first position. When a weak electro-motor power is used, an immediate return to the O is rapidly obtained, as soon as the approach of the luminous rays to the selenium is prevented.

Thanks to this entirely new method, as appliances of this kind are not to be found, as far as I know, in any observatories or laboratories, a photographer, having an eye on his needle, can ascertain at each moment the degree of light, and adapt to this degree the time of exposure in the camera.

A most curious effect consists in having the receiver for the selenium placed on the outside, upon the roof, for example, and communicating with the interior by a galvanometer placed anywhere. It is possible, without seeing any daylight, being lighted by a lamp, to follow, by watching the needle, all the variations of the outside light.

It is evident that this new appliance will furnish observers in meteorology with the means not only of ascertaining the action of the solar rays at any given time, but, also, to place on record at regular intervals luminous intensities in the same manner as we record the degrees of the thermometer, of atmospheric pressure, etc.

Our conviction is that all photographers will wish to have in their glass-rooms a similar instrument, which is so well adapted to furnish rapid and precise indications. We do not expect to show this appliance for some days yet to the French Photographic Society, and nobody has as yet seen it. But we have experimented with and studied it sufficiently to be certain that it will perform in a regular manner the work for which it is intended. In another letter we shall be happy to give more details in regard to this interesting subject.

We would like, after having made the final model of this photometer, as we understand it, to go still further, and to make of it an instrument giving the time of exposure, calculated upon a determined duration of the full sunlight. Shall we be able to do so? This is what we cannot yet definitely state, but we hope to succeed. The sensitiveness of an instrument of this kind is so great that the least vapor intercepting a small portion of the luminous rays is indicated; a person passing before the instrument by his fleeting shadow causes a momentary deviation of the needle. This is the most sensitive thing of the kind that can be obtained, as the motion, however rapid it may be, of an instantaneous stop, would produce an immediate visible effect. It is possible to judge by these few words of the possibilities of obtaining from this new scientific resource applications of all kinds, the greater part of which are certainly yet unthought of.*

LEON VIDAL.

PARIS, January 1st, 1881.

THE PHOTOGRAPHIC TIMES.

THIS useful and spicy little sheet will no longer appear under our cover. Its proprietors and publishers—Scovill Manufacturing Company, New York—think that it will better subserve their interests, cover a wider field, and do more good issued separately altogether. We bow to their will, and wish them great good fortune.

The *Times* has always served a most useful purpose. It always posted the craft upon matters of commercial interest, and its selections from the English and translations from the German and French magazines were the very choicest, and the best ever given to the American votaries of our art.

This good work, which our overplus of original matter constrained us always from engaging in, will be continued by the *Times*, and, in order that our readers may continue to share its advantages, we shall *club* with the *Times*, and offer our two magazines (subscription price, $7) at $5.50. Those who have already paid for our magazine, can have the *Times* for 1881 by sending us 50 cents more.

The rest of the story is told by the prospectus, as follows:

419 & 421 BROOME STREET,
NEW YORK, January 5th, 1881.

PHOTOGRAPHERS:

We respectfully beg leave to call your attention to the *new series* of our monthly journal, which shall be known as the *Photographic Times and American Photographer*, to be issued on the 15th of each month.

The editorial department will be conducted by Mr. J. Traill Taylor, late editor of the *British Journal of Photography*, London, whose name alone is sufficient guarantee as to the character of our columns.

Our contributors will be of acknowledged standing as photographic and scientific writers, and will represent the best talent at home and abroad.

Pre-eminent in this department we name Mr. Edward L. Wilson, editor of the *Philadelphia Photographer*, who is the recognized authority in the *new* world—as was Mr. Taylor in the *old*—on the history, progress, and practice of photography, and the allied sciences.

We take pleasure in assuring the fraternity that we shall thus be enabled to offer them the most practical and interesting photographic journal published, destined, we trust, to become the most popular.

Terms.—The subscription price of *The Photographic Times and American Photographer* will be $2.00 per annum. Single copies, 25 cents.

Yours very truly,
SCOVILL MANUFACTURING CO.,
W. IRVING ADAMS, Agent. Publishers.

WHERE SHALL WE MEET?

BY J. F. RYDER.

I WOULD like to say a few words upon the subject of our next place of meeting, and without, in the least, making them uncomfortable or antagonistic to any one. My desire is for the best interests of our new Association and the avoidance of mistakes in its management.

I think the selection of New York city was a mistake, and, considering the month of August as the time fixed, the mistake is emphasized. I was sorry the effort to reconsider the matter of location failed, and I would be glad to have it changed yet. I believe it would be better to follow the course that seems best for a successful and pleasant meeting than be tied to a parliamentary millstone *just because it is parliamentary*.

Mr. H. M. Beeles, in the *Photographic Times*, suggests as the only way for the Executive Committee to gain possible consent from the members who voted upon the matter of location, for changing same, would be to address a postal card to each

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* We reluctantly lay over a portion of this valued letter until next month, in order to accommodate our emulsion proje t.—ED. *P. P.*

without argument, *pro* or *con*, and ask for a *yes* or *no* answer, and the majority result to determine whether or not the location could be changed.

To me it seems that if there was no good reason for desiring a change, there would be no call for making it; if there *are* good reasons, then I believe they should be stated as facts or arguments.

The gentlemen who so stoutly favored New York, were, in the main, new members, and unacquainted with the points favorable or unfavorable to location. They had not been through the years of experience that was gleaned by the National Photographic Association, whose officers and members always shunned New York as a place of meeting, by common consent.

The parties who would naturally most profit by large gatherings of photographers, the Scovill Manufacturing Company, E. & H. T. Anthony & Company, L. W. Seavey, and others, never encouraged a meeting for New York, knowing well it must be disastrous in point of expense, and no advantage gained to justify it.

Let us look squarely into the face of New York in the month of August, the hottest of the year. The daily death rate from sun-stroke and excessive heat is counted by dozens and scores. All who can afford it, have deserted the city and sought the country or cooler localities; and by tens of thousands daily do people rush down to the Island and shores for a breath of air.

To pack a number of hundred photographers in some hot hall for three or four days' work, at such a time, I believe would be unwise; to pay a very high price for such discomfort, I think would also be unwise. There is much to be seen in New York, at all times, that is desirable and important to see, but we need not necessarily hold our meetings in the city to attain that end. Within a few miles of the city can be found a number of places where we could locate with advantages of comfort and economy over the city itself, and when the work of Convention business is finished, we can take all the time for city visiting and sight-seeing we choose, without interfering with or neglecting the real business we meet for.

It is the purpose of the Executive Committee to look into the merits of various points, including New York city, in due time; and if, in the opinion of the Committee, there be found sufficient advantages in any one point over others, it will be recommended; and it is hoped, in such event, the Association may approve of, and order, or consent to the change. If not, we will carry out the will of the majority and try New York.

OUR PICTURE.

THERE is such a thing as getting into a rut and staying there forever and the day after. In some cases this is the best and only way to make any progress, especially when our streets are banked up with snow, as those of our northern cities have been for the past month.

But we are getting *out* of *our* rut. What we started to say was, that for several years it has been our way to pound at our readers on the subject of art culture. We believe it is still the one thing they most do need, and so, during 1881, we propose to keep in the same good old rut. It may prove tedious to you, but some things tedious and tiresome are *good* for us.

We proceed, then, by giving such instruction as we think may serve you, and by placing examples of good results before you, to keep you in mind of what you are most deficient in, and to supply you a stock of it.

Our effort this month consists in a dozen examples of careful, artistic, first-class posing and lighting by that prince of American photographers, Mr. H. Rocher, of Chicago, from studies selected by Mr. Rocher personally for our purpose.

Believing, as we do, in the freedom of the press, we feel that we need offend no one when we claim for Mr. Rocher the *first place in America as artist photographer*, and we know of no one in the world who can excel him. He is the peer of all. No one more thoroughly *puts himself*, *his heart*, *his feelings*, into his work than Mr. Rocher. Each picture which proceeds from his studio is made to bear the impress of the *master* of the studio upon it, and to bear upon its face, in its lines, in the management of the light, in its pose, in the choice of accessories and their arrangement, in *all* of it, *more or less of Henry Rocher!*

To do this, Mr. Rocher produces no work at a low price. He bargains in the beginning with his sitter for a certain amount of time, for which he makes a corresponding charge, and which he conscientiously devotes to the party in hand. He must himself be satisfied before he lets the subject go. He forms his ideas of what he desires to secure in the beginning, and then every effort is put forth to secure the same. In following this rule he is independently inexorable. As a result, his works are not so plenty as are those by parties who are less careful, but they stand among the highest production of our art wherever they are found, not only at home, but also abroad.

The twelve examples before you were reduced from boudoir-size pictures, and are intended to serve as studies. We hope that as such they will serve many of our readers a very useful purpose. Could we choose the way of those who are to be our future photographers, we should advise them to follow the Rocher school of photography rather than that of any other. It is the best; if you cannot reach it, at least aim at it, and follow it rather than the prevalent style adopted by those who strive for splurgy effects, the intention of which no fellow can find out.

As we went to dinner on the day of this writing, we passed the photographic displays of several theatres at their doors. The mangling of these models (which in such cases are always good), the sensational lighting, the inattention to focussing, the slovenly chemical work, the utter absence of care in them, were enough to sicken any one who desires to see steady improvement in our art. Why such work is made, we know not, unless it be by contrast to enable us to take greater pleasure and comfort in the elegant productions of Mr. Rocher.

Study them *well*—the attitudes of the models, the arrangement of the draperies, the management of the light, the introduction of the accessories, the chemical effects—all, all are worthy of the most careful attention. If all photographers could and would adhere to the same rules of business and the same rules of art that Mr. Rocher does, our fair art would have a much greater name, and her followers would be richer and more notable citizens. We want you to aim high, and therefore place the mark high.

A word or two about our talented master, and we are done.

Henry Rocher was born in Vetschau, Prussia, November 29th, 1824. He came to New York in 1853, and after serving a time as merchant and clockmaker, all the while feeling the aspirations of the artist burning within him, he entered photography, in 1862, with $114 capital, and in his own quiet way has made both fortune and fame, though a sufferer at the great fire in Chicago. He has obtained a medal wherever he has competed for one, and always those of the highest order, several having been awarded him in Europe, also, among men whom we used to look up to as our teachers and guides.

Of Mr. Rocher's personal virtues, it is hardly within our province to speak. We have enjoyed his friendship many years, and always considered it a privilege to be included among the friends of one so modest, so unpretending, so quiet in his life, so amiable and good, and so full of the artistic fervor and understanding which makes a man great in whatever he undertakes. Long may he live to work away at his own peculiar methods, and may he have health to enjoy a large reward when he grows tired, though he himself says that "it should be the desire and hope of every true photographer to die at the camera."

The negatives and prints were made at our own rooms, the S. & M. Dresden paper imported by Mr. Gennert being used.

* * *

Low Prices in Chicago.—We are sorry to hear that club rates and general competition have so reduced prices in Chicago that the better class of photographers are becoming discouraged. Too low prices are a disgrace and place our art in a most lamentable position. When things come to such a pass, there is but one thing to be done—the leading men in the business must agree to raise their prices to a certain standard, and keep them there, in spite of the tendency among second-rate men, and the strongest and best will win in the end.

Editor's Table.

An Old-time Firm Dissolved.—We always regret to see old associations broken up, for there is nothing more pleasant than an old, congenial, successful partnership. Such has been that of Messrs. Gatchel & Hyatt. For twelve years these gentlemen have catered to the needs of the fraternity in the great West and Southwest, and now, as announced in their advertisement on another page, they are dissolved. Mr. Gatchel continues the business at Cincinnati, Mr. Hyatt at St. Louis, and the Louisville house at present sails under the direction of the old firm. The history of this firm has been unprecedented, for where is there another in photography that has so long kept the balance of power in *three* cities at once?

In 1864 (the year of *our* birth), Mr. L. B. Darling started in Cincinnati a branch of his Providence, R. I., house, under the management of Mr. W. D. Gatchel, who bought the business in 1868, and admitted Mr. Hyatt. In 1869 they bought out Mr. Merritt in Louisville, and putting in a large stock of goods, conducted both houses until 1873, when the establishment of Mr. W. H. Tilford, at St. Louis, was added, and a trio of strength was completed. Since then these three large houses have been in successful operation. They will continue under the same management, and their patrons will really know no difference. We wish all sorts of good things for the grand *triumvirate* as long as they are in the trade. Read their announcement a few pages further on.

We take pleasure in calling the attention of our readers this month to the new and useful invention of *Powelson's Photographic Silver-Bath Heater*, just placed in the market by Mr. Hiram J. Thompson, Chicago, whose advertisement will be found on another page, with large cut of the article.

Every photographer knows the annoyance arising from trying to work his chemicals in cold weather, when there is lack of harmony in the temperature of his various solutions. Many and varied expedients have been adopted, and the success has been as varied as the expedients were numerous.

The heater now offered by Mr. Thompson fills the long-felt need. The arrangement is so simple, compact, and easy to keep in order that it will commend itself to every practical photographer. It consists of a close wooden case, with a double-hinged top, and shelves for the accommodation of two bath-holders. A false bottom of metal is placed in the case, under which is room for an ordinary coal-oil lamp. This portion is reached by a small door in the lower part of the case. The lamp can be left burning all night with perfect safety, the metal false bottom acting as radiator to diffuse an equal warmth throughout the box, thus keeping baths or other solutions in the case of an equal temperature, and ready for use on the coldest day as soon as the light is strong enough.

Our long-suffering brethren will be glad to be able at last to get hold of something that will stand their best friend during the reign of Jack Frost. Examine the advertisement carefully, read the excellent testimonials, and then judge for yourself.

The photo-engraving processes promised for this issue must be laid over because of the non-arrival of one of the plates, now on the way from France.

So much unexpected emulsion matter came to our hands for our present issue that we give way to it, and omit the French *resume* promised, together with a number of other good things, including "Society Gossip." We give you the best.

The Dry-Plate Committee do not make a very satisfactory report, but probably it is the best they can do. If they could have been together, and more thoroughly gone into their work, it might have been more satisfactory. What the fraternity want to know *now*, is, not whose plates are best (for as with paper, so with plates, the make of one party may work better than that of another in certain hands), but whether or not the time has now come for photographers to take up the emulsion process with reasonable hopes of success. This point once established by gentlemen so able as the members of this committee, would be a great satisfaction. However, it seems photographers are not going to wait for any committee, but are already pretty deeply involved in emulsion. Doubtless, they will be more so after reading our present issue. Generally, committee reports are not infallible. These gentlemen give us some useful hints, after all, and doubtless did much patient work, so we thank them and honor them.

Our cover outline study this month is from a very pretty cabinet picture sent us by Mr. E. D.

Ormsby, Oakland, California. It is not a pretentious picture at all, but is a far preferable pose for "our own sweet American girls" to the outrageously unmeaning twists given to them by photographers knowing nothing of "pictorial effect." *Naturalness* should *never* be forgotten. Who shall be honored on the next cover?

A Marvel of Cheapness.—The Scovill Manufacturing Company, 419 Broome Street, New York, through their able agent, W. Irving Adams, Esq., are always striving for the good of the craft, and now announce as "ready" the two English Year-books (which are usually sold at fifty cents each), *under one cover*, for 75 cents per copy, postage paid. Doubtless, all dealers have it. Doubtless, every photographer *will* have it. The *British Journal Photographic Almanac*, edited by Mr. W. B. Bolton, is *always* full of capital articles by the best writers, and will have the additional charm of a portrait from a negative by Mora, of New York, well worth the price of the book.

The *Year-Book of Photography* and *Photographic News Almanac* for 1881 is edited by H. Baden Pritchard, F.C.S., this year, the twenty-second of its life. It contains a portrait of Daguerre, being the only photographic portrait ever published in this or any other country. Gelatino-bromide in a nut-shell. Preparation of plates—choice of gelatin—selected formulæ—instructions for preparation—approved drying-boxes—recognized developers and intensifiers—defects and remedies. Standard formulæ. Every formula required in photographic manipulation is included, suitable alike to the student and instructor. Every-day experiences of the acknowledged masters of photography. The photographic societies and photographic journals in the world. One hundred and one articles by the ablest photographers of the day. Secure this double book while you can.

One of our correspondents who has bought and likes *Mosaics*, 1881, writes us as follows:

"I want to ask the parties named below to further explain, as their articles are not quite explicit enough for me. In 'New Retouching Fluid,' Mr. Niel Harrington speaks of using 'veneer varnish.' I can't find any such name in the books, and the painters, dealers, and furniture men do not know of such a name for varnish. Augustus Barret on 'Developed Enlargements' don't work very good with me. I have tried to get a good process for a long time. Gents! more light.

We have lost the addresses of the above-named gentlemen. Will they kindly give our readers a little more light on their articles through these columns?

The Liverpool *Journal of Commerce*, January 4th, 1881, gives a short and very interesting biographical sketch of the late Mr. John Thomas Towson, who died at his home in that city on the 3d inst. We clip that portion only which bears on photography.

"Towson, John Thomas, was born in Devonport in 1804. His father was a chronometer and watchmaker, and the son was intended by his parents to follow the same business. His inclinations caused him, however, to turn to the study of scientific subjects. He was the first to direct the attention of photographers to the fact that the luminous and chemical foci were not of the same length, a knowledge of which fact, at a later period, enabled Dr. Draper, of New York, to take the first photograph from life. He was also the first to devise the means of taking a photographic picture on glass, and the use of the reflecting camera."

"RYDER'S ART GALLERY.

"*You are respectfully invited to engage in a friendly discussion with your co-workers on the evening of 31st inst., at 9 o'clock, at the Gallery.*

"Subject:—'*THE OYSTER:*

"'*Does it hold its own as a palatable esculent? and in what form does it put its best foot forward?*'

"*Yours truly,* J. F. Ryder.

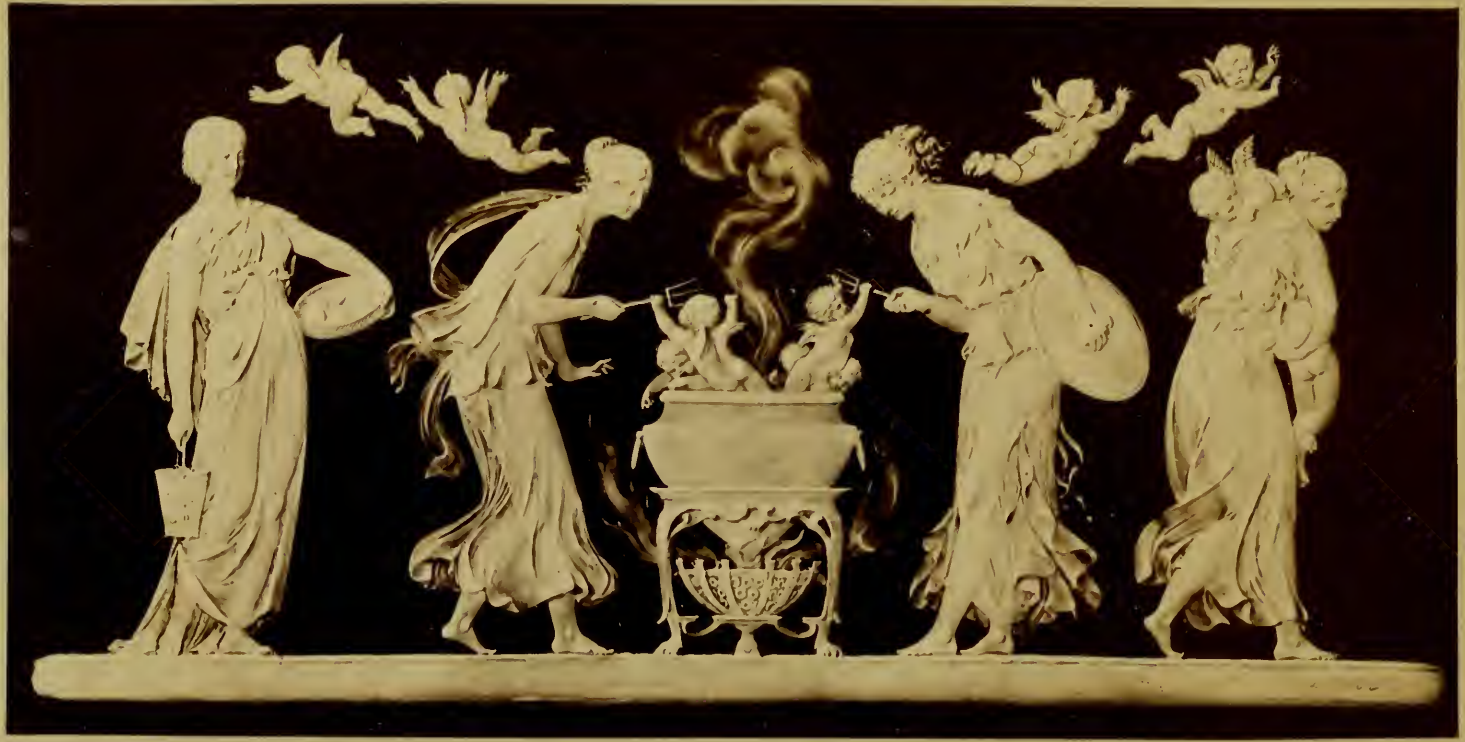
"Cleveland, Dec. 29th, 1880."

The above card will explain itself. We could not go, but, through the Chicago papers, we learn that the affair was a success, and the subject for discussion proved to be well relished by the guests.

The banquet was given by Mr. Ryder in acknowledgment of the good feeling displayed by his employees in presenting him with a handsome gold watch and chain. The reception was well attended, and broke up on the entry of the new year, amid hearty good wishes from one to another.

Douglass, Thompson & Co., Chicago, send us their usual monthly issue of the *Photographers' Bureau of Information*. This is a most excellent medium for gaining and giving information in regard to employers and employees. One entire page of this issue is devoted to announcements of our new books, *Mosaics*, 1881, and *Pictorial Effect in Photography*. We are glad to see our friends trying to push these books. They are worth every cent of the price, and more.

Our exchanges will kindly notice our new address, and direct their publications accordingly.



FROM A PLAQUE. BY L. SOLON.

THE KITCHEN.

Boston Public Library.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. MARCH, 1881. No. 207.

PROCEEDINGS OF EXECUTIVE COMMITTEE OF THE P. A. OF A.

Pursuant to the call of the President of the Executive Committee, Mr. J. F. Ryder, that body met at the office of the *Philadelphia Photographer*, 912 Chestnut Street, on Monday, February 7th, 1881.

The following members were present: Mr. J. Carbutt, President of the Photographers' Association of America; Mr. J. F. Ryder, President of the Executive Committee; Mr. G. A. Douglass, Secretary of the Photographers' Association of America, and Mr. Edward L. Wilson, Secretary of the Executive Committee.

The principal object of the meeting was a consultation as to the time and place of holding the next Convention.

After some discussion, Mr. Douglass offered the following:

Whereas, At the last Convention of the Photographers' Association of America, held at Chicago, in August last, it was decided to hold the next Convention of the Association in New York in August next, be it

Resolved, That when we adjourn it be to meet in that city on Wednesday, 9th inst., at 10 A.M., at the office of the Scovill Manufacturing Company, No. 419 Broome Street, for the purpose of arranging to carry out the will of the Association if the way be clear.

Seconded, and carried.

Mr. Wilson moved the following:

Whereas, Certificates of membership are needed, therefore be it

Resolved, That Messrs. Ryder and Douglass be appointed a committee to procure a design and to have made the necessary copies for the use of the Association.

Seconded, and carried, and the Committee appointed.

On motion, adjourned as above.

Agreeably to adjournment, a second meeting of the Executive Committee was held in New York, at the time and place named, the same members being present.

Mr. Charles Wager Hull, General Superintendent of the American Institute, met the Committee, and accompanied them to the Exhibition Building of the Institute, with a view of securing it for the purposes of the next Convention.

A thorough inspection of the building, with its resources, was had; inquiry made as to others; hotel accommodations looked into, and other work done, until the afternoon, when the Committee met again, at 419 Broome Street, and were called to order by their President, Mr. Ryder.

The following resolutions were offered by Mr. Douglass.

Whereas, It being the will of the Association that our next Convention be held in this city in August next, it is

Resolved, That the Second Annual Convention and Exhibition of the Photographers' Association of America be held in the American Institute Exhibition Building, in this city, opening on Tuesday, August 16th, and closing not later than August 20th, 1881.

Resolved, That a vote of thanks be tendered Charles Wager Hull, Esq., for his courtesies to us to-day, and for the facilities offered for our Exhibition, which will aid us much in our work.

Seconded and carried.

Mr. Wilson offered the following:

Whereas, This Committee having informally consulted Mr. L. W. Seavey as to their action in this matter, and having invited him to serve as Local Secretary, and he having expressed his willingness to undertake the arduous labors of that office, it is

Resolved, That Mr. L. W. Seavey, of this city, be appointed Local Secretary.

Seconded by Mr. Douglass, and carried.

It was also resolved, that the President of this Committee appoint such sub-committees as, in his judgment, are needed for the furtherance of the work of the Convention.

He, accordingly, made the following appointments:

Committee of Arrangements. — Messrs. Douglass, Carbutt, and Wilson.

Committee on Transportation, *South.*—E. Klauber.

Committee on Transportation, *West.*—A. Hesler.

Committee on Instruction and Practice.—G. A. Douglass and Edward L. Wilson.

The President to be *ex-officio* on all.

After further desultory consultations and mutual congratulations, the Committee adjourned, to meet at the call of the President.

Edward L. Wilson,
Secretary.

ASSOCIATIONS, CONVENTIONS, AND FRATERNITY.

"Photographers hoping to progress individually, and aid in the work of elevating the standard of their profession, need to come together mor in society meetings, conventions, and to fraternize when and wherever they can. The day has long since passed when the 'secrets of the dark chamber' has any significance. We occasionally meet a photographer who has this air of exclusiveness, and imagines he has clothed within himself wonderful secrets of compounding and manipulation, who, if he would throw aside his hallucination, and take a few lessons from those who claim no magic power, would greatly improve his work and add to the dignity of himself and profession. We cannot expect that in all places societies can be formed, but where there is *one*, we should have at least a dozen flourishing and healthy. It would greatly improve even those who have only one competitor, to meet often, gossip over the news of the month, brought to them in the journals, compare their observations of daily practice, as found within the covers of their note-books, and to follow up their studious habit. We know that we are urging the mixing, at times, of oil and water, but it can be done, if the disposition is there. Starting with the least advantages of fraternity, we pass to places where six or more can come together, then to larger points, and reaching the great cities, where it is often advisable to have more than one association. Now, having reached this point, and the interest awakened in local fraternity, we quickly reach the National Convention, where all may come and compare notes after each year's study. The exhibition of the various classes of work, the outpouring of knowledge gained during the twelvemonth elapsed, invite a generous rivalry, and urge harder study for the year to come. Each society coming to the parent convention, feels that it is recognized and cared for. Every individual photographer has a fraternal interest in his professional brother, and as time goes on we find the art-science of photography represented in their meetings by men and women of greater culture, broader views, and a stronger feeling of fraternal interest, where each succeeding generation shows the influence of associated effort, and we meet the student photographer in place of the mechanic of former years. As the student of medicine must, to properly fit himself for his profession, learn the anatomy of the human figure, so must the coming photographer know the superstructure of his art-science. He will be proficient in the laws of optics, allowing him to use his lenses intelligently; of chemistry, acquainting him with the subtle changes constantly going on in his laboratory; of the principles of art, guiding him in his compositions. An outgrowth of the cultivation of the community of interests found in associated effort, great and small, will be the establishing of a College of Photography, where competent teachers will fit the student for his chosen profession, and we shall have skilled labor coming to us under the guarantee of a recognized diploma, thereby meeting with a better service, at the same time advancing photography, its light shining brilliant beside its sister arts and sciences. We invite your earnest thought and aid in this matter. Do not leave it to your neighbor, and feel that when it is accomplished you will countenance it. Neither say it is wholly imaginative, but rather do what you can for the purpose desired. Fraternize more, talk more, study more, in fact be a photographer in the fullest sense of the word. No profession or business on the earth has a broader field for culture, or is capable of so great an extent of knowledge which can be used to more advantage than our art-science of photography."

We revert to the excellent thoughts above (found in Douglass, Thompson & Co.'s *Bureau of Information*), as seasonable at this time, when all live photographers are considering what they shall do to further the interests of the *Photographers' Association of America*, and to help make its next Convention in New York a grand success.

As will be seen by the announcement of the Executive Committee, the place and time are fixed, and we predict a great gathering and enthusiastic meetings.

As a member of that Committee, we are able to say that preparations are being made for a useful and practical Convention—one that will show the world that photography can never again stand still in this country. We therefore indorse all the suggestions of our Chicago friends, and hope *every one interested* will see how important it is to the growth of our art that this Association be maintained zealously and vigorously. A study or two to help us appreciate what we have of privileges superior in this country, may be found in the following article, which we reproduce from the Scovill edition of the *Year-Book of Photography*. The writer seems to be ignorant of the existence of *our* National Associations, old and new, but he sees the importance of such in the old country, and some of his inklings of our old Daguerrian Association of four or five decades ago, are interesting to our juniors, and we reprint his remarks "untrimmed."

"Is a Professional Photographers' Association Practicable?

BY CHARLES PEARCE.

"The one feature common to Photographic Associations throughout the country, is the absence of discussions relating purely to professional practice. The papers read, the subjects debated, are either of artistic or scientific interest, and matters of business which concern only the professional photographer are tabooed. As all the Associations contain as many amateur as professional members, the rule is a wise one; but the question arises, whether a professional Photographers' Association would not be an advantage and a gain to many. It is certainly a fact, so far as London is concerned, that professional photographers, as a body, hold aloof from the two existing associations. Their interest in photography is bounded by the pecuniary returns which its practice brings in week by week, and they are not particularly concerned in abstract discussions, in the solemn reading of papers having a more or less remote connection with the art, as *they* know it, or in the announcement of some discovery, which may result in something practical in the dim future, but which, in the present, might be a method of extracting sunbeams out of cucumbers, for any use which the professional photographers can see in it. Of course, it is easy to say that if a man takes no interest in the discussions of photographic societies, the loss is his own. To a certain extent this is true; but when this portion of the photographic community is a large one, and when the influence it exerts on the public is sufficiently powerful not to be despised, it is to be regretted that some agency does not exist by which professional photographers could be brought together to discuss subjects of a purely professional nature, in which they would certainly benefit, or might benefit others.

"It is a curious fact, that in the earliest photographic associations formed, professional practice was the main object kept before the members. The preamble of the New York Daguerrian Association, founded in 1851, states solemnly that 'Whereas, the Daguerrotype likeness, when properly executed, is more faithful to nature than any other style of portraits; and whereas many impostors are flooding our country with caricatures at a much less price than a good picture can be afforded for, thereby not only robbing their patrons, but degrading this most beautiful art, and, what is still worse, those who are competent to practise the art successfully, those who would improve and go on from one improvement to another, until the last victory was achieved; and whereas, these men are held in poverty and disparagement by the mere catchpennies, who hold themselves up in the world as artists, when they are not; and whereas, the increased demand for the best miniatures that can be taken, calls for a fair compensation for the same, in order that operators may be encouraged to use still greater effort in trying to excel in this most beautiful art;' therefore, the originators of this most elaborate preamble resolved to found an Association, as the only panacea against the 'catchpennies.' And not only this, but in the enthusiasm which new undertakings generate, they promised and vowed that they would do all 'in their power for the advancement of the art, and each other, in the study of the same, and bury forever all feelings of envy and jealousy which have hitherto existed.' From this it is to be feared that American Daguerrotypists were not exactly a happy family—indeed, there are not wanting hints at some extremely black sheep, as we read further on 'that we discountenance operators giving instructions to any but those whose natural talents and moral standing qualify them for successfully practising the art.'

"At a subsequent meeting a most important resolution was agreed upon: 'That no person be admitted a member of this Association except he will agree not to take pictures for less than one dollar and fifty cents, until we have adopted a code of by-laws for the government of the Association.' The extract from the minutes following this resolution is extremely interesting. It runs: 'Committee on by-laws to report at next meeting—*adjourned for supper*,' an announcement which gives quite a pleasant flavor to the formality and preciseness of the foregoing. The code of by-laws here alluded to was surely the most formidable thing of its kind ever framed, but whether its extreme elaboration was due to the presence of a lady on the committee—the committee only numbered three—deputed to draw it up, we dare not speculate. Its whole spirit, however, was purely in the interests of the professional Daguerrotypists. Section 2 of Article 8 provided that 'none but practical artists of high moral and artistic standing actually engaged in the production of heliographic pictures shall be a member in this Association;' Section 3 stated that 'no person shall be eligible to membership who publicly advertises low-priced pictures, by signs (*sic*), or other means;' while Section 7 ordained that 'any member leaving the profession to engage in any other calling or occupation shall be transferred to the list of honorary members.' And finally, to keep up what might be termed, literally, an *esprit du corps*, Article 12 declared that 'on the death of a member it shall be the duty of any member having cognizance thereof to report the same immediately to the standing committee, that such measures as may be advisable may be entered into.'

"It is to be regretted that no record remains as to how this Association progressed, or whether it had the desired effect of driving out of the field those who publicly advertised low-priced pictures 'by signs.' Whatever this method of advertisement may have been, it is, however, pretty certain that a Professional Photographers' Association founded on similar lines would nowadays be a failure. As to charges, that is a question which a man must decide for himself. In matters of art there can be no 'ring,' as is supposed to be the case in bread, meat, or fish. Photography is as much governed by the theory of the survival of the fittest, as it is by the laws of supply and demand. But though this is a subject which might only incidentally arise in a body composed of professional photographers, there are many others which would well bear discussion with profit, though uninteresting to amateurs.

"Matters of detail in manipulation, 'wrinkles' and 'dodges,' are never introduced into the discussions of the societies, from a feeling that they are too trivial to occupy the attention of the members, one-half or two-thirds of whom would never be called upon to exercise them. But these very 'wrinkles' and 'dodges' are oftentimes of the utmost value, both in regard to saving of time and material, as every practical photographer well knows. Then there is the question of fashion, as determining the style of a picture. It is quite possible for a man to hit upon a new style of portraiture, which, if others took up, might become the 'rage,' and so give a spirit to business. All these things are unsuitable for a learned and scientific society, but would come well within the scope of a purely professional association. Such an association might, of course, in working, have drawbacks, but it is at least worth a trial."

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 364, vol. XVII.)

THE opinions given at one of the meetings of the Chicago Photographic Society on alcohol, were certainly well taken. The late Mr. Pary—a once celebrated maker of pyroxylin, many times, in print, advocated the using of purer alcohol. There is one thing, which I have no doubt has been overlooked, from which much trouble is liable to ensue—the measuring of alcohol in *graduates which are* NOT *clean.* This should always be seen to when purchasing it from a drug-store (where the same one is used for so many articles), it being advisable to measure and mark the measurement upon the bottle, and request the druggist to pour the alcohol direct from his stock-bottle into yours.

The remarks on soluble cotton are not a little curious—that the manufacturers place different brands on similar articles, because the appearance of the various samples is so remarkable, running all the way from longer fibred white to shorter and even dusty amber; the difference in the proportions of ether and alcohol in which they will dissolve; one sample carrying an amount of haloid salts well, which would make another collodion over-iodized and streaky; then the time necessary for the setting of the films will vary, the collodion made with higher temperature cottons, requiring more time in order to avoid surface-streaking on immersion in the bath; the appearance of two plates, if coated with collodion made, the one from high- and the other from low-temperature cottons, will present a marked difference during fixation in the hypo bath; and amongst other differences, the one withstanding the application of some of the chemicals used in photography, which would break up the other into innumerable reticulations.

There is one part of the camera-box which should be especially well looked after, and that is the "cut-off" in the plate-holder. I mention this now that gelatin plates are being used, and upon which we receive such strict injunction to preserve from actinic rays other than those passing through the lens. "Cut-offs" become warped and clogged, particularly if used for wet plates. The surest way of testing them is to hold the shield toward the sun, when the slightest error can be detected. It is true, in order to repair it, it is a risky operation to separate the piece covering them from the holder when glued firmly, but this might easily be obviated by having it nicely bevelled to fit under the horizontal pieces, and being *screwed* down *without* gluing, when it could readily be removed without damage to the holder.

Then, the slide becomes worn at the end, the harder parts of the wood protruding, and it becomes warped, making it difficult to place in position without admitting light through the cut-off. Taking these things into consideration, and the fact that with the English pattern plate-holder (at least for plates up to 8 x 10 inches) the focussing-cloth can be thrown over the camera, and the slide drawn and replaced *underneath* the cloth, thus surely preventing the admission of light; would it not be well to adopt it, especially for landscaping? Besides much space and weight might be saved; drawing from the top, there is no fear of being "cornered," as sometimes happens when the slide is drawn horizontally; and the focussing-screen could be arranged (as in the English boxes) so as to spring into position on the withdrawal of the plate-holder, thus saving it from many a mishap.

(To be continued.)

HARD RUBBER BATH-HOLDERS.

BY R. E. WOOD.

My experience with these is that the *hard* rubber part gives no trouble if only kept clean, and now and then rubbed over with wax softened in turpentine oil; but the *soft* rubber under the wooden cap on the tight-top holders, for field work, gives endless trouble; waxing, greasing, or cementing seems to have no effect; the stuff is not pure rubber, and cannot be protected from the action of the bath. With me it seems to decay, as it were, every little while a coating of black, nasty, decomposed stuff is scraped off, rewaxed, the bath filtered and sunned. This has caused me more trouble than all else in the business; have had three different ones, all acted the same. Laid the whole lot aside—bought a glass bath-holder—broke that in a short time, then took the troublesome rubber again.

This does not seem to correspond with Douglass' practice, as given in the June *Philadelphia Photographer*. Wonder if he had any different cover for his; or does he manage to go so steady as not to wash the cover with the bath? I do not wonder that the makers do not know what to do when the users are so much at variance in their statements. One says they are all right, no trouble; now here comes this deponent, swearing by all that is great and good, that the cover of that infernal bath-holder has caused more fog than all else in my years of photographic experience. I am as positive of it as that these words are being written.

Now I would say to those interested in the sale of these tubs, to put *pure* rubber under that wooden cap, or something else that will not hurt the bath, then we will say, "blessed be the manufacturers of the hard rubber bath-holders."

ALBUMENIZED COLLODION FILMS.

A WORD TO ALBUMENIZERS—A NEW AND USEFUL ARTICLE WANTED.

BY D. BACHRACH, JR.

For a long time, an easy, ready method of printing transparent positives of *the very finest quality*, for enlargements or reproductions, has been desired. It is true, we have the carbon method. The objection to this is, that while the results, when successful, are very fine, not many photographers are acquainted with the manipulations; but the greatest objection is the uncertainty of results, except in the most experienced hands. Besides this, when enlargements of many diameters are wanted, the grain of the film is so coarse as to show transparent spots in the enlarged negative. I should have said, rather, that it is due to the light refracted through small atoms of gelatin in the semitransparent parts. For reproducing negatives the same size, the results are very fine, when successful. The best enlargements, so far (except the method I propose to advocate), I have obtained with the rapid dry plates (gelatin) of Mr. Carbutt; but the number of transparent spots, and the liability to fog, are still great objections to this method, which in time, perhaps, will be overcome.

But now, if we had strong collodion films, albumenized just like our papers, with very little modification, we would have a ready means of producing these pictures of the very finest quality, and with an ease which would place it within the reach of every photographer. Such an article would lead, by its simplicity, to the printing of a positive from every valuable negative, as a precaution against injury, *and would yield a handsome additional revenue to the manufacturer.*

Of the quality of such a transparency there can be no question, as every one who has seen those magnificent French transparencies on albumenized glass is convinced. I have made some by a method first introduced by Mr. Cox, of this city (and now used extensively), for printing porcelain pictures, which showed that the method would yield the finest results. But albumenizing on glass is liable to many failures; and, while the method is good enough for porcelain prints, the manipulations are too complicated for every photographer to use. One great trouble is that very great care is necessary in getting the albumenizing solutions free from bubbles and imperfections, and the time occupied thereby. Good results are obtained more easily, I find, by albumenizing collodionized glass; and this can be used in the same silver solution as the paper, and treated the same in every respect. Now, this brings me to the point mentioned, viz., that the manufacturers of albumen paper are the ones to help us out.

Now, it will naturally be asked of me, "How do you propose to do it?"

Well, I would proceed in this wise. First, to thoroughly clean a plate-glass, then polish it with a five-grain solution of pure beeswax in pure benzole, as is done in carbon transfers. I would then flow over a thick, plain collodion, and, when set well, dip it gradually, face down, into a flat dish of prepared albumen, the same as paper, allowing the plate to rest on pieces of glass at the edges, so as to avoid touching the bottom of the dish. Take off the bubbles, and, when ready, take it out of the dish; let drain, and then allow to dry spontaneously in a perfectly horizontal position, and in a place free from dust. When the film is dry, loosening the edges with a penknife will cause it to leave the glass readily. Now, this prepared film can be treated precisely as paper, only, when to be used, it ought to be fastened at the corners, by means of wax, to a glass plate, before silvering, so as not to curl up; and, when dry, can be printed like paper, until deep enough. It is then again fastened to glass, after printing, until toned, washed, and dried, when it can be kept between the leaves of a book, ready for use at any time.

The only difference to be observed in the albumen solution is that it ought to have one grain of bromide of potassium to each ounce, in addition to the other salting, in order to retain the fine detail and reduce too strong contrasts. We have used this in our salting solution for solar enlargements with immense benefit for strong negatives, the printing being nearly twice as rapid. For *very thin* negatives, it is best omitted; but the number of such is very limited. The albumen process, with chlorides alone, is apt to give very strong results; but the beauty of transparencies by this method surpasses anything that can be got by other methods, and the grain is so fine that the greatest enlargements can be made without coarseness.

If such a prepared film were within the reach of every photographer, there are thousands of negatives that would have these positives printed from them as a guard against accident, as well as for fine enlargements. It may, perhaps, be that sheets of mica or gelatin films, made insoluble with chrome-alum, would answer for a permanent support to this collodio-albumen film, and thus avoid the stripping off; but I have pointed out the direction, and any means that will secure that result will be welcome.

Who will first put them before the craft?

ART-TRAINING AND PHOTOGRAPHIC ART.

When we took this editorial chair, in the winter of 1863, we made it our duty to look into the weak points of our art and its work, and endeavored to give them our special care.

The one thing, more than all others, which impressed us as a weakness, was the lack of art-culture and art-knowledge which pervaded our rapidly rising craft. We thereupon attacked it with a vim, and we believe our readers will do us the credit to say that we have been faithful ever since in keeping the subject before them. We believe, too, that our efforts have had good results. The necessity for going on still exists, however, and will exist so long as new manipulators enter the field, and the old ones last. We shall therefore keep up the pounding in this direction. We have one grand compeer in Mr. H. P. Robinson, whose admirable *Pictorial Effect in Photography* we have recently re-published. He has done more than any live photo-artist, by example and precept, to elevate the pictorial standard of our art, and the dozens of medals he has received from all over the world have attested to his talent and usefulness. He goes on, and we shall follow him to the end. We are glad to see others, once in a while (would there were more), taking up the cudgel with us.

From these we make a few extracts. First, from an article in the *British Journal*, by our old friend, Dr. John Nicol, of Glasgow, a graceful writer, a good artist, whose heart is in our art, and whose words are always wise. He says:

"Any one who has been out on what is sometimes called a 'field day' with a photographic party, will know what I mean when I say that for many of our brethren, professional as well as amateur, something more than 'where to go' is required, viz., what to see when they get there.

"The result of my own experience of such parties is that there are generally present one or two members who have the reputation of being 'up' in art, and, consequently, in whose judgment the rest have full confidence. Almost unconsciously the party divides itself into the leader or leaders and the led; and no sooner does the former plant his tripod than he finds himself surrounded by almost the whole band, each eager to see the point of view which he has selected, being fully impressed with the belief that it is the only point from which a good picture can be got.

"Now, while, in a certain sense, it may be true of art, as of poetry, that artists are born, not made, it is no less true that no man can be a true artist without much and careful study, and study especially of the work of those whose position has met with universal recognition. For this purpose, the walls of the various exhibitions now held in almost all the larger cities and towns of the country are most excellent schools, the only drawback being the influence of color. The charm of this and its influence in giving perfection to the picture, is apt to discourage the photographic student as he recognizes the impossibility of emulating it in the camera.

"Valuable, then, as are the ordinary exhibitions of paintings, from an educational point of view, to the photographic student, much more valuable are the rarer exhibitions of 'black and white,' as in this the photographer feels that he meets the artist on something more nearly approaching equal ground. The rapidity with which he now works enables him to catch the fleeting blinks of sunshine, and secure the passing expressions that he may be able to evoke, and so far there is in the domain of monochrome little that the artist may do which an able, educated photographer may not attempt."

Dr. Nicol now alludes to an exhibition then open in his city, and says further:

"This is neither the time nor place for anything like a detailed description, nor is such required, my purpose being simply to call the attention of photographers to the value of any opportunity for self-education that may occur. There is hardly a picture on the walls, of such collections, from which something may not be learned, although, of course, there are some of more value in this direction than others.

"I hope photographers generally, in their own interests, will take advantage of every such opportunity for art education. Those who know little may by patient study learn almost all they need to know, and those who know most cannot fail to learn more."

In a later issue of the *British Journal*, Mr. J. M. Carroll makes some excellent remarks on "Photographic Art," which we add to help us in our work of impressing upon photographers the importance of *more art study*.

Mr. Carroll writes, viz.:

"In the history of photography, almost up to the present period, its scientific aspect has engrossed the larger share of the thoughts and time of its exponents. This to a certain extent is very natural as attending the birth of any wonderful discovery, its first stage proving so attractive as to warp our understanding, and render us for a long time oblivious to the far worthier ends of which it is capable. How much more than in any analogous art has the enlightened student of photography to complain of this tardy recognition of the just claims which, impatient of restraint, his beloved art-science has at last budded forth!

"The magnificent works of the last ten years show us what power the camera has in conveying to us ideas of beauty, truth, sentiment, and feeling. But I think it will be conceded that this progress has been made after too slow and gradual a fashion; that the efforts made to afford means and encouragement to the young student of photography to investigate and develop this higher power are altogether inadequate and unworthy of this progressive age.

"Of such vital aid as literature, in our country, indeed, it has none, unless one solitary book* and sundry desultory and spasmodic attempts in the shape of papers at rare intervals may be correctly called a 'literature.' The technics are by no means neglected in the same way. And yet there are numbers of its masters well qualified to supply us with the sorely-needed tomes.

"Then, as equally indispensable as means of practice, might not our exhibitions and societies transfer a greater share of their patronage from chemical innovations to art? In brief, from the tools to the work?

"One word more and I have done. The South London Photographic Society has raised itself into a proud position among societies by the establishment of its artistic competitions, which, if adopted by the other societies in the kingdom, and developed to their full extent, would mark an epoch of usefulness in the annals of such bodies and fulfil the ends for which they were established. There is no reason why the competitions should not be international, and so act as a further stimulant by their friendly rivalry, on the same lines that have been found so helpful to the arts of painting, sculpture, and music.

"The time has arrived when, by the exercise of such means—a few of which only I have detained the reader to glance at—we may expect at last to behold crumbling before us the ancient and unsubstantial partition which divides photographic art from fine art immortal and universal."

TRIED, AND FOUND GOOD.

BY E. G. ROBINSON.

It is one of the hardest things in the world for a photographer who has been in the habit of working in a certain way to ever change his manner of doing things. He regards improvements unfavorably—not because he objects to improvements, but because, until he is used to the new way, he has one more element of uncertainty to contend with. For instance, when I went to the Chicago Convention I knew the *pro* and *con* of using aniline blue and alum in printing, *i. e.*, from what I had read I knew it to be a good thing. But after I had heard Mr. Clemons talk about it, and seen the results which he showed, I determined to try it. I was delighted with the result. My prints were never yellow, but when I placed one treated with it beside one that had not been so treated, I was surprised.

The blue, if used in small enough quantities, will give a perfectly pure white; the most delicate tint imaginable of blue can be detected by placing a print so treated on a piece of dead-white paper. Those who have not used it do not know what they miss. The *modus operandi* is briefly this: Put, say, six drops of aniline water-blue, letter R, in your fixing bath; the solution is made by dissolving one-quarter of an ounce of blue in sixteen ounces of water; after rinsing as usual, immerse for five minutes in a saturated solution of alum. If the prints are not blue enough to suit you, use more of the aniline, and *vice versa*.

Again, Mr. Bachrach, of Baltimore, has repeatedly told of the many uses asphaltum can be put to about the gallery. It seemed to be his hobby—so I thought until I tried it. In the last *Mosaics* he gave us another dose of it, and now that I know its virtues, I would advise every one to keep a bottle of it about the operating-room. One day, the boy, by accident, left a large Agate silvering-tray on the lighted gas-stove; the

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*Mr. H. P. Robinson's admirable work, *Pictorial Effect in Photography.*

intense heat (the dish being empty) caused the enamel to crack and fly off, leaving a place as large as a silver dollar of the bare iron. Of course, it was then useless; but I happened to think of the asphaltum. I poured the place vacated by the enamel level full with the varnish, and set it away in a hot place for a few days, to dry. It now is as good as ever; it will stand nitrate of silver and nitric acid, although not a very strong heat.

But the best thing was yet to come. When I commenced using gelatin plates, I found I would have to have several trays. I, to commence on, got 5 x 7 plates, and had no trays smaller than 10 x 12; I accordingly took a dressed backing, cut it 6 x 8 inches square, cut strips for sides, tacked the pieces together, making a light wooden tray, and gave it a good coat of asphaltum, allowed it to dry, then gave it another coat, dried it, and gave a third, taking care to fill the joints well each time, and the thing was complete, as well as cheap. The varnish acts like glue, and unites the tray as solidly as if it were rubber; indeed, I cannot see why they are not as good as rubber.

Another thing which I got up spunk enough to try, was the contrivance given by Mr. Daggett, page 85 in 1880 *Mosaics*. It is an immense improvement over the old way of sticking the silvered sheet against the wall with a tack. It saves time, stains on the hands and on the paper, and patience, and is very simple. I, however, use only the upper half, or, rather, the upper horizontal sticks. They are well worth the trouble of making them.

One word more. You do not know what comfort is until you have a lot of extra-rapid gelatin plates on hand, and use them on dark days for babies, etc.; they are immense, and no mistake

MICHIGAN CITY, IND.

TINTYPES.

BY R. E. WOOD.

In the January number of the *Philadelphia Photographer*, 1880, there is a first-rate article from the pen of T. M. V. Doughty, all except the last three words, "nor any tintypes." In the August number, Dr. Vogel speaks of the "cheap and nasty" ferrotypes.

I suppose there are few, if any, of our craft who admire these productions, or feel particularly proud of the little ability necessary to produce them, the sole incentive to their production, on the part of the photographer, being the money they bring.

In the opinion of the writer, the notable gentlemen above mentioned make a great mistake in decrying a portion of our business that returns so much revenue, and is practised more or less by nine-tenths of the profession. These pictures certainly do no harm; and so long as people are found who, for various reasons, wish to pay their money for them, just so long will they be made. The writer believes in them. Why? Because in a single day, on several occasions, I made twenty, thirty, and even forty-two dollars clear cash by them. That would make one believe in almost anything.

This was done while out landscaping, in out-of-the-way places, where it was really an accommodation to the people, and at times when I had nothing else to do, on account of wind, dull weather, or some other good reason. We were all pleased—parents, to have their babies' faces; girls, those of their sweethearts, and *vice versa;* the drunks, with their cigars in their mouths, chattered their orgies over their besotted-looking faces; dogs, cats, game, toys; in fact, almost everything imaginable is brought for a picture.

A quarter-plate only costs one dollar, with one person on it, one or two pictures, and twenty-five cents each additional person. It is done in a few minutes.

My heavy pocket makes me happy; and I say with emphasis, that as happiness is the great end and aim of human life, we may as well get it from "tintypes" as any other source. Hence, gentlemen, do not waste any more ink in crying down these things. We are going to make them as long as the money comes so easy for them.

The shade of a tree has been my studio many times, also the north side of a barn, with a sheet on a pole for a background, and much more pleased with the financial results than with the hard-earned though beautiful and worthy twenty-five-cent stereos.

SOCIETY GOSSIP.

Chicago Photographic Association.—The regular monthly meeting was held in their rooms, College of Pharmacy building, on Wednesday evening, January 5th.

Mr. Rocher being unavoidably detained, Mr. A. Hall was elected chairman *pro tem.*

Minutes of the last meeting read and approved.

Mr. G. M. Dempsie, of Chicago, was elected a member.

The following report of committee appointed at last meeting to call a meeting for the purpose of discussing the subject of prices was submitted:

"*To the Chicago Photographic Association:*

"At a special meeting held in the rooms of the Chicago Photographic Association, on Wednesday, December 15th, 1880, under the call of your committee, we hereby respectfully report that, in our opinion, said meeting, as far as its object of holding the same was concerned, was not encouraging, and that the question of prices is, as shown by the remarks of those present, not within the influence of this Society.

"Your committee would therefore respectfully request to be discharged.

"Joshua Smith, *Chairman.*
"C. Gentile,
"P. B. Greene,
"George Klein,
"G. W. Collins."

It was moved and seconded that the report be placed on file, and the committee discharged. Passed.

The regular business of the meeting was then taken up, viz.: the election of officers for the ensuing year.

Previous to voting, the members present were called upon to pay their yearly dues, without which they were ineligible to vote; every one present responded to this call.

Balloting was then carried on vigorously for an hour or more, and, as a result, the following gentlemen were elected for the year 1881: *President*, A. Hall; *First Vice-President*, J. E. Beebe; *Second Vice-President*, C. Gentile; *Secretary and Treasurer*, F. H. Davis; *Executive Committee*, Joshua Smith, George Klein, G. W. Collins.

Some little discussion followed the election as to where the society should hold its future meetings, but as no agreement was arrived at, the following motion prevailed:

Resolved, That the chair appoint a committee of three to arrange for next place of meeting, the Secretary to notify members as to result of committee's work. Mr. Hall appointed Messrs. Smith, Gentile, and Greene.

On motion, adjourned.

J. E. Beebe,
Secretary.

Another regular monthly meeting was held at Douglass, Thompson & Co.'s warehouse, Nos. 229 and 231 State Street, on Wednesday evening, February 2d, A. Hall, President, in the chair; the meeting was called to order at eight o'clock.

A communication from the retiring President, Mr. Rocher, was read by the Secretary. In this letter Mr. Rocher thanked the members for the honor conferred upon him, and for their kind co-operation in the discharge of his duties. He remarked that the past year had been a prosperous one for the profession, introducing many new inventions, which he had no doubt would prove of great benefit in the hands of skilful workers. He congratulated the members on their excellent selection of officers for the ensuing year, and hoped the Association would prosper under their guidance. In conclusion, he said:

"Allow me once more to wish you all the prosperity that true lovers of our art so richly deserve, and believe me to be as ever

"Yours fraternally,
"H. Rocher."

On motion of Mr. Douglass, a vote of thanks was tendered to Mr. Rocher, and the communication placed on file.

The new President, Mr. A. Hall, then delivered an informal inaugural address, in which, after thanking the members for the honor conferred upon him, he went on to say that about ten years ago a number of Chicago photographers, himself being one, met at Mr. Sawyer's gallery, on Washington Street, and inaugurated this Association. How many of those original members did he see before him to-night? If any of them were present, he would be obliged by their standing up. (Three members arose, Messrs. Douglass, Klein, and Davies.) "There seems to be four of us. Where are the others? Many of them have been scattered far and wide. We had just got our Society into good running order when the great fire swept away the studios, and in many cases the homes, of a great number of our Chicago photographers, and before we had recovered from that, came a financial panic of great severity, entailing a period of commercial depression almost unexampled in its duration. But this Society lived through it all, and now we may, I think, confidently look forward to a season of prosperity. For myself, I have had some bitter experiences. I have lost business; I have lost property; more than all that, I have lost near and dear friends; but, gentlemen, it is a great consolation to me to feel that the fact of my occupying this chair to-night is a proof that I have not lost the confidence of my fellow-men."

The report of the retiring Treasurer (Mr. Smith) was presented. In it he commented on the fact that many members were in arrears, and that there was an unpaid rent bill.

Mr. Gentile moved the adoption of the report. Carried.

Mr. Gentile thought that if his advice had been accepted by the Society last spring, when the stock-houses offered, between them, to pay the rent of a hall, the Society would now be in a better financial position; but this offer was declined.

The committee appointed at the last meeting to find a place of meeting, reported that, as the majority of the members seemed to be in favor of returning to the old place, they had taken no action in the matter.

On motion, the committee was discharged.

Mr. Mardock stated that he was willing to give five dollars towards paying the rent of a hall. He thought that the meetings might be held in the various galleries of the members. That was the way they did when fighting the bromide patent in New York, a good many years ago, and they found it was the only way to get the photographers together.

Mr. Douglass.—I am willing to put down my name for five dollars on account of the rent fund, on behalf of the firm of Douglass, Thompson & Co. With reference to the "gallery plan," I would remark that it had been tried here, and failed, for various reasons; the members did not recollect the place appointed for the next meeting; some of them had no facilities for lighting their galleries, etc., and so it happened that the Society drifted into the old store at 158 State Street, and for a long time they had very successful meetings there, but after awhile the impression became prevalent amongst many of the members that it would, perhaps, be for the welfare of the Association to have a hall of its own, and that many might then be induced to attend who were staying away from the meetings because they "did not like the idea of meeting in a stock-house." With this view, it was decided, at the regular meeting in April last, to move to the Chicago College of Pharmacy, and the meetings have since been held there until to-night. In this connection I want to say that my own motives have been somewhat misunderstood, and that it is as a photographer, not as a stock-dealer, that I am interested in the welfare of this Society; being, as many of you know, an old photographer myself, and having followed the business practically for many years.

Mr. Gentile.—I think the offer of Messrs. Mardock and Douglass both generous and practical. No doubt the other dealers would follow their shining example, if the matter was brought to their notice. It is much better to have a definite place of meeting than to be moving around to different galleries.

Mr. Mardock.—The gallery plan seems to work well in eastern cities.

The minutes of the last meeting were next read and approved.

There being no proposals for membership, the Secretary then read a communication from Mr. Hesler, regretting his inability to be present, and sending for the inspection of the members some prints from negatives made by himself on Meyers's dry plates (gelatin). Various opinions concerning them were expressed by the members, but some 5x8 interiors were universally admitted to be fine.

Powelson's Bath-Warmer was exhibited, in operation, by Mr. Douglass, and Mr. Smith showed a pneumatic shutter of his invention, which he considers better and cheaper than Cadet's.

On motion of Mr. Smith, a resolution was passed instructing the Secretary to have circulars printed and sent to those members whose annual dues are in arrears.

Mr. Joshua Smith stated that he has entirely abandoned the wet process, and sent his negative bath to the refiners. He prepares his own gelatin plates by a formula worked out by himself (which he did not divulge for the benefit of the members), which are not so sensitive as some commercial plates claim to be, but are two or three times as rapid as wet plates. These plates give excellent results, seldom needing intensification, and allowing a considerable latitude in exposure, without any modification in developer. He can now get through more work with less trouble and worry than before. No anxiety about negative bath, and no fumes of alcohol and ether. Awhile ago he was quite insensible to the odor of these last-mentioned chemicals, but now he can detect it very quickly on entering a gallery where they are used. His assistant can easily make from one hundred and eighty to two hundred 5 x 8 plates per diem, at a cost of less than four dollars per hundred, labor and material. He thinks this is decidedly cheaper than buying plates at present prices, and he has not succeeded to his satisfaction with any commercial plates he has tried. The great trouble with commercial plates is their excessive rapidity, on account of which a slight error in exposure is fatal; thinks that a rapidity two or three times that of good wet plates is quite sufficient for studio work, and with such plates a considerable latitude in exposure is allowable.

The President.—Do you make as many failures with gelatin as you formerly did with wet collodion?

Mr. Smith.—No.

The President.—If you have several customers waiting, do you develop each plate as soon as exposed, or lay them aside and take the risk of failure?

Mr. Smith.—I take the risk; simply lay the plates face down in a box, and leave them until a favorable opportunity to develop. I have not the least desire to return to wet collodion, and have laid in stock for making five thousand plates, which quantity I intend to make during cool weather, and expect it will be sufficient to last me through the summer.

In answer to a query by Mr. Maryatt, Mr. Smith remarked that he did not consider that the advantage of gelatin over collodion was so much a matter of rapidity as of quality. A wet collodion plate was developed by precipitation, a gelatin plate by oxidation; consequently, the latter will give a more harmonious negative, especially in case of under-exposure, which can be corrected by modifying the developer; and in case of intensification being required, the gelatin plate will strengthen, proportionally all over, while with a wet plate the deposit will be piled on the high-lights, leaving the half-tones almost unchanged. Thus the gelatin plate gives a more harmonious negative.

Some one asking how the retouchers liked the new plates, Mr. Smith replied that, although at first they disliked them, now that they were accustomed to them, they preferred them, as there was less work required.

Mr. Mardock, in answer to an inquiry, said, that bromide of cadmium could be made with one equivalent of water instead of four, as usual, but manufacturers obviously had no inducement to do so. Bromide of ammonium can be made without any water but that of constitution. In this condition, however, these salts were less soluble in alcohol than in their ordinary commercial form.

At the next meeting he will give some information concerning the manufacture of the various bromides, and also describe a method of testing strength of silver solutions, at once simple, reliable, and rapid; the usual hydrometer test was often very misleading.

Mr. Mardock also very kindly remarked that he would be happy to make samples of pure chemicals free of charge for any of the members.

On motion, adjourned.

F. H. Davies, *Secretary*,
78 Michigan Avenue.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS OF NEW YORK.—Regular meeting was held in Beethoven Hall, January 5th, 1881, Vice-President Schaidner in the chair.

After the reading and approval of the minutes of the previous meeting, and the order of business was carried out, Mr. J. Traill Taylor, late editor of the *British Journal of Photography*, gave the Association a clear and concise description of lenses, commencing with the first photographic lens made to the present portrait combinations. Illustrating by diagrams on a blackboard, and a rare set of instruments, the various means and methods taken by inventors and manufacturers to correct or remedy curvature of the field, distortion, and spherical aberration. Mr. Taylor's valuable collection of lenses also formed an interesting feature of his paper. Archer's (the inventor of the collodion process) liquid lens, the only one in this country, and, perhaps, in existence, was examined with pleasure by the members.

The thanks of the Association were given to Mr. Taylor for his instructive and interesting lecture, by a unanimous vote of the members present.

Mr. T. C. Roche exhibited prints printed in the fraction of a second, with only the light of a kerosene-lamp to produce the effect. The process is a discovery of Mr. Roche, and, no doubt, will revolutionize photographic printing to a great extent.

A. H. ATWOOD,
Secretary.

THE BOSTON PHOTOGRAPHIC ASSOCIATION.—The January meeting was held on Wednesday evening, the 5th inst., at No. 333 Washington Street; the President in the chair. The meeting was called to order at 7.40 o'clock, there being twenty-two gentlemen present. The minutes of last meeting were read and approved.

A discussion was opened as to the best evening for holding the meetings; an objection was made to the present evening (Wednesday), as several prominent photographers were engaged on that night.

Mr. Frederick C. Low moved that section first of the By-laws be amended by striking out the word "Wednesday," and inserting "Monday." No further action was taken, it being left for the next meeting to decide.

An adjournment was then moved to witness Messrs. C. F. Richardson and F. H. Blair develop some dry plates.

The negatives developed were portraits, and the operation was watched by the whole meeting; the operators explaining the details and answering numerous questions as they proceeded. All were much interested in the developments, which were quite successful.

Messrs. Richardson and Blair worked dry plates of their own manufacture, and received the thanks of the Association for their instructive experiments.

W. H. PARTRIDGE,
Secretary.

A meeting of the Association was held on February 2d, 1881, the President in the chair.

Short discussions on various subjects.

On motion of Mr. E. J. Foss, the Association proceeded to the election of officers.

Messrs. D. T. Burrell and W. T. Bowers were appointed to receive and count the votes.

The organization chosen for 1881 is:

President.—E. J. Foss.
Vice-President—D. T. Burrell.
Secretary.—W. H. Partridge.
Treasurer.—E. T. Smith.
Executive Committee.—J. W. Black, W. T. Bowers, and George H. Hastings.

Mr. T. R. Burnham moved that Mr. Benjamin French be made an honorary member, which was seconded by Mr. J. W. Black and Mr. Frank Rowell, by very complimentary remarks. He was elected unanimously.

Mr. Foss alluded to the long years of devotion to photography by Mr. A. S. Southworth, his earnest work for the society in years past, and the deep interest he takes now, although not able to attend the meetings, moved that the society show their appreciation by making him an honorary member, which was done.

Mr. Foss invited the society to hold their next meeting at his studio, in Malden, and by vote his invitation was accepted, with thanks.

E. J. FOSS,
Secretary *pro tem.*

The Pennsylvania Photographic Association. — The following officers were elected at the last meeting of the Association:

President.—J. C. Steinman.

Vice-Presidents. — David Marston and Thomas H. McCollin.

Treasurer.—J. R. Clemons.

Secretary.—Thomas T. Mahan.

Executive Committee.—John G. Flood, Isaac G. Tyson, and F. Normant.

No business but the election of officers was transacted.

Photographic Society of Philadelphia.—Minutes of the regular monthly meeting held January 6th, 1881, the President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read and approved.

The Secretary read a letter from Mr. Willis postponing his paper and experiments on the platinum process until the first meeting in February.

Mr. Samuel Wagner was proposed for membership by Mr. Corlies.

Mr. Bell exhibited one of the American Optical Company's latest improved view cameras for 8 x 10 plates. Its extreme lightness, combined with compactness and variety of adjustments, reflected great credit on its designer.

Mr. Corlies exhibited a card photograph of a person in two different positions in the same picture, and explained the apparatus used to produce this effect, consisting of a movable shutter placed in front of the lens, and so arranged as to expose but half of the plate at a time.

Mr. Carbutt stated that he had been experimenting with gelatin positives, and found that a plate prepared with a slow-working emulsion, developed with a ferrous-oxalate developer, and intensified with bichloride of mercury and cyanide of silver, gave satisfactory results.

On motion, adjourned.

C. R. Pancoast,
Secretary.

[*Correction.* — I would call your attention to an error in publishing the minutes of last month. In the report mention is made of an *iris diaphragm*, as applied to photographic lenses. It was printed *inside diaphragms*, and consequently failed to express the writer's meaning.—C. R. Pancoast, *Secretary.*]

Minutes of the stated meeting held January 20th, 1881. In the absence of the President, the Vice-President, Mr. John Carbutt, took the chair.

The Secretary being also absent, Mr. Samuel Sartain was appointed Secretary *pro tem.*

The minutes of the last meeting were read and approved.

The Room Committee reported that Mr. David Pepper had presented a number of photographic books to the Society.

On motion a vote of thanks to Mr. Pepper was adopted.

On motion of Mr. Browne, the room committee were authorized to purchase books to add to the library at a cost not to exceed twenty-five dollars.

Mr. Samuel Wagner was unanimously elected a member of the Society.

Dr. George Fox and Mr. Philip Godley were proposed for membership by Mr. S. M. Fox.

Mr. Fox stated that he had a gelatin negative, made last November, which now requires a much longer exposure in printing than when first made, in consequence of the yellow color which now distinguishes it. This is owing to the hypo. not having been thoroughly eliminated before intensification with mercury.

Mr. Carbutt alluded to the English papers having so many allusions to the use of alum for eliminating hypo. as a new thing, whereas this property of alum was announced to this society at least eight years ago, by our member, Mr. Clemons, who demonstrated its value in eliminating hypo. from silver prints.

Mr. Carbutt described a very convenient method of arranging developing solutions for use, by a stand to contain the bottles, which were supplied with corks having dropping-tubes.

Some discussion took place on the relative keeping qualities of collodion and gelatin emulsions.

Mr. Corlies had used last summer plates coated with emulsion fully three years old.

The Secretary was instructed to convey the thanks of the Society to H. B. Pritchard for the copy of the *Year-Book of Photography* he had presented to the Society, and for the portrait of Daguerre.

The meeting then took a recess, and were entertained by an exhibition of some excellent lantern slides made by Mr. Corlies and Mr. Fox, a large proportion of which were from gelatin negatives.

On motion adjourned.

Samuel Sartain,
Secretary *pro tem.*

A regular meeting of the Society was held February 3d, 1881, the President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read and approved.

Dr. George Fox and Mr. Philip Godley were duly elected members of the Society.

A recess was now taken to listen to Mr. Willis' interesting lecture on the "Platinotype Process."*

On motion of Mr. Browne, the thanks of the Society were tendered to Mr. Willis, and it was suggested that his admirable paper be published in the *Philadelphia Photographer.*

Mr. Leaming exhibited some prints he had made by this process, and remarked on the great difficulty he had experienced in sensitizing the paper.

Mr. Browne stated that, for amateurs especially, it would be a great advantage to obtain the paper ready sensitized.

Mr. Willis replied that he would give the subject his attention; and thought, no doubt, he could overcome the trouble of the paper not keeping.

Mr. Wallace described a disordered negative bath, which contained a copious grayish-yellow precipitate, soluble in an excess of water.

Mr. Bell replied that he had met with such troubles, and stated that the precipitate was nitrate of ammonia, derived from frequently neutralizing the bath with aqua ammonia. This salt is only sparingly soluble in a solution of nitrate of silver. He further stated that such a bath would give fine and clean negatives, but full of pinholes.

After a general discussion on the troubles of the negative bath, the meeting was, on motion, adjourned.

C. R. Pancoast,
Secretary.

A regular meeting of the Society was held on February 17th, 1881, the President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read and approved.

On motion of Mr. Browne, the Secretary was instructed to notify Messrs. Barrington and Hacker, of the Excursion Committee, to prepare a schedule of routes, from which the Society could choose one for their annual excursion.

The Room Committee reported that they had purchased the books for which the appropriation had been made at a previous meeting. As this appropriation was insufficient to purchase the number of books required, the Treasurer was instructed to place twenty-five dollars additional to their credit, making a total of fifty dollars.

Mr. Fox exhibited a copy of *The Journal of Transactions of the Photographic Society of Great Britain*, and suggested that it be added to our list of periodicals, which was, on motion, agreed to.

Mr. S. Sartain moved to suspend the By-Laws to permit of the election of a correspondent and an honorary member.

On motion of Mr. Corlies, Mr. Oscar G. Mason, of New York, was unanimously elected a corresponding member of the Society.

As a further recognition of the kindness rendered this Society, Mr. William Willis, Jr., of New York, was, on motion of Mr. Browne, unanimously elected an honorary member.

On motion of Mr. Fox, the Chair appointed Mr. S. Sartain a Committee to Revise the Constitution and By-Laws, with instruction to report as speedily as possible.

Mr. S. Sartain offered the following amendment to the Constitution:

Resolved, That Article III of the Constitution be so amended as to provide for the election of honorary members as a distinct class from corresponding members therein provided for.

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* This lecture is published in full on another page.

Mr. Carbutt showed two excellent pictures of church interiors, the negatives of which were made on "Keystone" Gelatin Plates.

Messrs. Bates and Fox exhibited a number of very successful prints from gelatin and emulsion negatives.

The remainder of the evening was devoted to the trial of a number of lantern objectives and the exhibition of lantern slides, the property of Messrs. Bates, Corlies, Browne, and Fox.

On motion, adjourned.

C. R. Pancoast,
Secretary.

PHOTOGRAPHIC EMULSIONS.

What They do and How They do it.

(Continued from page 51.)

Formulæ and Directions for Working the Eureka Dry-Plate Co.'s Extra-Rapid Gelatin Plates.

Preliminary Precautions (*Dark-Room*).—We recommend an additional sash, conveniently arranged, so as to slide over the one used for wet plates, or it can be hinged at the top, if necessary, and must fit tight, so as to exclude all rays of actinic light. The sash may be glazed with dark *ruby-colored glass*, or ordinary glass, upon which is pasted one or two thicknesses of dark orange-colored paper, and then coated with negative varnish.

Now put your dark-room in order, and remove everything not actually in use, and have a regular and convenient place for everything to be used.

Lens, Box, and Holder.—Examine your lens carefully, and see that there is no bright or reflecting surface, such as a brass screw, rims of the lens-cells, etc.; also, see that stops are not bright or shining (rubber ones are best). Now, examine the box and bellows, to see that it is perfectly light-tight; this can be best done at night, by the aid of a lamp. The holder must be in good condition (not an old one saturated with silver), as the least particle of silver will cause fog and trouble that cannot be accounted for. We, at least, recommend new inside kits (and would say the "American Optical Company" are now making double holders expressly for dry plates at about half the cost of the old wet ones, which will fit all their regular boxes). See that the slide fits the aperture well, and that the holder fits tight up into the box.

Alkaline Developer.—

No. 1.—Pyrogallic Acid, . .	2 grains.
Bromide of Ammonium,	2 "
Water, ...	1 ounce.

Put in square bottle and label No. 1.

Of this solution mix enough for "to-day only," as it will not keep.

No. 2.—Concentrated Liquor Ammonia, . . .	1 ounce.
Water, ...	80 ounces.

Put in round bottle and label No. 2.

This solution keeps indefinitely in well-corked bottles.

Look at label for any change in developer.

Fixing Solution.—

Hyposulphite of Soda, .	4 ounces.
Water, ...	20 "

If this solution is too strong, it will cause the film to blister.

Intensifying Solution.—

Saturated Solution of Bichloride Mercury, . .	10 ounces.
Iodide of Potassium, . .	1¼ "

Dissolve the iodide of potassium in ten ounces of water, and pour gradually into the mercurial solution until the precipitate thrown down is nearly re-dissolved, then add one ounce of hyposulphite of soda in crystals.

To strengthen, use a flat dish, pouring the intensifier on the same as development to cover the plate, and watch closely. Should it have gone too far, place it in the hypo. bath again, until it is reduced to the proper density.

For Reducing Intensity.—

Saturated Solution of Bichloride of Mercury, .	4 ounces.
Saturated Solution of Cyanide of Potassium, . .	4 "
Water, ...	20 "

For use, place plate in dish, or pour off and on until the necessary reduction takes place.

Rules for Development.—After exposing a 6½ x 8½ plate, see that your dark-room is properly guarded, and place the plate, film side up, in a 7 x 9 rubber dish, having ready in a graduate 1½ ounces of solution No. 1, and 1½ ounces of solution No. 2; mix, and flow on the plate, which must be kept well covered, and the dish kept in a constant rocking motion, but only sufficient to keep the plate well covered and allow the solution to act. If air-bubbles appear, break with the touch of the finger. If the solution does not flow freely around the edges of the plate, rub that part of the plate gently with the finger. Watch your plate well, occasionally bringing close to the window. Allow the plate to remain in the solution until the required density is obtained. If the details in the shadows appear with the high-lights, or, in other words, are developing without sufficient contrast, it will indicate that the plate is over-exposed, so add one or two ounces more of solution No. 1 (do not stop to measure), which will retard the development and allow the image to gain in density.

A little practice, with close observation, will produce good printing qualities from a negative, which, if developed with the full proportion of No. 2, would have been utterly useless from over-exposure. Under-exposure can be corrected, to a great extent, by increasing the proportion of No. 2 in the mixed developer, but the addition should be made at once, before the development has gone too far. After development, wash well.

It will seldom be necessary to strengthen the negative, if the plate is properly developed; it should remain in the hypo. about five minutes after it appears to be fixed, and not exposed to actinic light until it is fixed. When fixed, wash well. We now recommend soaking the plate in a saturated solution of alum, as it removes the least trace of hypo., and also the yellow tinge, which always appears if the development was not exactly correct.

These formulæ may appear complicated, but in practice you will soon become familiar with them.

If you have all the solutions ready prepared in proper bottles, and the light regulated, success is certain.

Necessary Hints to Success.—Be very careful as to any actinic light in your dark-room, and use a ruby-colored lantern or lamp (the top well covered with a dark tinned cone), if necessary.

Before putting away the negative to dry, place the plate in a dish of water, film down, one end raised, and allow to soak for half hour, and lastly, rub with a tuft of cotton to remove any sand or sediment that may have remained on the film.

Should you desire to dry the plate quickly, soak in alcohol from ten to fifteen minutes, and set aside to dry.

Heat may be employed in varnishing the negative, which must be perfectly dry.

Make a proof-print before varnishing, to see that the negative is of proper strength.

Keep your hands free from hypo. while developing, or fog will be the result.

If your negatives have too much contrast, weaken the developer by adding water.

Over-exposure is preferable to under-exposure, and we invariably recommend a second sitting where the latter has occurred.

Keep your solutions cool, as heat, while the plate is moist, will dissolve the film.

The strengthening, reducing, fixing, and alum solutions can be repeatedly used, but require changing when they become too much discolored.

The Eureka dry plates will work from six to ten times quicker than wet plates, and will be found surprisingly uniform in this particular; and we claim that both during and after development they resemble the wet plate more than any plate in the market, and *guarantee* every package to work well if directions are followed, as each batch is thoroughly tested before being packed.

Ferro-Oxalate Development.—The ferrous-oxalate develops slower than the alkaline, and requires a little longer exposure, but for positives and transparencies it is preferable.

Prepare the two following solutions:

No. 1.—Neutral Oxalate of Potassium, . . .	8 ounces.
Water, ...	32 "

No. 2.—Protosulphate of Iron, .	3½ ounces.
Water, ...	9½ "

For use, add one part of No. 2 to two parts of No. 1. After mixing the two solutions, No. 1 and No. 2, they must remain perfectly clear, and of a nice ruby color. Add the iron to the oxalate, but never the reverse.

This developer is poured over the negative in the same manner as the alkaline, in a hard rubber dish. Instead of adding bromide of ammonium, an addition of developer that has been already used, will have the same effect, and by mixing new developer with old in different proportions, any desired degree of density can be obtained.

For a restrainer, if over-exposure is feared, dissolve sixty grains of bromide of ammonium in one ounce of water, and add four to six drops to the developer.

Calling your attention to the inclosed formula of the Eureka Dry-Plate Company, I will state the following advantages that are derived by their use, and assert that the trial of a single dozen will prove the following facts:

1. We claim and guarantee that the development of the Eureka dry plate is more simple and rapid than any plate in the market, and resembles the wet plate during and after development. This important feature alone places them in advance of all competition.

2. They dispense with the necessity of asking your patrons to "come to-morrow," or the first bright day, for the Eureka dry plates work sufficiently quick for good results on any ordinary cloudy or dark day.

3. In using the Eureka dry plates good chemical effect is always obtained, with fine details and half-tones, with clear glass in the deep shadows, and cannot be equalled for beautiful effects in lace and white draperies.

4. For babies and groups, old and nervous people, they should always be used, as they insure a good negative the first sitting, thereby saving much valuable time in the operating-room, together with the annoyance of keeping your patrons waiting.

5. And then there is more money in the use of the Eureka dry plates, compared with the cost of ether, alcohol, cotton, glass, iodides, bromides, silver bath, etc., to say nothing of the waste and occasional fog to which the wet process is heir.

6. They dispense with all costly chemicals, such as collodion, silver bath, etc., together with the bother of keeping them in order.

7. They dispense with the use of cyanide, stains on hands and floor from silver.

8. They dispense with all streaks and pinholes, harshness, chalky-whites, etc., which is frequently the case with the wet plates.

9. They dispense with the wear of holders, kits, and box, from drippings, which cannot be avoided in using wet plates.

10. They dispense with the use of the head-rest, if desired, as they work so rapidly.

11. On account of their rapidity, the most difficult subjects and positions can be obtained.

12. Also, interior views, which with the wet plates would be an impossibility, can be made with these plates.

13. For out-door work they can be worked instantaneously, using a drop-shutter for moving objects, such as horses, vehicles, persons skating, etc.

Eureka Dry-Plate Co., *Mfrs.*,
J. C. Somerville, *Secretary*. St. Louis.

HOME-MADE GELATINO-BROMIDE DRY PLATES.

No. 1.

BY JAY DENSMORE.

There has been so much said during the past year, in the several photographic journals, concerning the wonders of the new gelatino-bromide dry plates, that all progressive photographers have doubtless been more or less agitated in their feelings as to the best thing for them to do about it. As usual, when any new discovery is made, the enthusiasm of many leads them to extremes of language when they recount its "advantages," and, therefore, gelatin plates are declared to be more than wonderful in their performance. Ten, twenty, and even forty times greater rapidity, it is asserted, can be attained by the new process than with the old stand-by, wet collodion, besides other advantages much too numerous to mention in this place.

It is an old proverb, that there must be some fire where there is a great deal of smoke; but it is not always safe to conclude that a big fire always accompanies a big smoke; so, therefore, it is well for photographers to keep cool and listen quietly while the wonders of gelatin plates are being thus rehearsed by those who have them for sale, or who have allowed themselves to be carried away, as it were, by the one feature of superior rapidity incident to the new process, and, without much experimental knowledge of their own, wildly declare that wet collodion is superseded by this new candidate, and that, hereafter, gelatin, and gelatin only, shall be the medium in which the negative impression shall be taken. But while keeping their mental balance, also their dollars, and their silver baths and collodions in good order for use when business calls, it is well that they should inquire into this new thing, and ascertain what it is; read about it, inquire about it, and find out about it all they can, and when leisure from the demands of business permits, experiment with it, thus enabling them to judge understandingly concerning its merits, and not be misled by the enthusiastic, inconsiderate statements, on paper, that are so frequently met with in our professional literature at the present time.

It is a very easy and simple matter to make gelatin dry plates as good, or better, than the best commercial plates in the market, and by making them yourselves, you will be improving your chemical and experimental knowledge, which, in many instances, I fear, needs such improvement sadly, besides being able, thereby, to know something about the plates you are using, and work more understandingly and successfully with them.

About two years ago, I heard of the wonders of gelatin, as it was then just coming to the front in photographic circles in Europe, and was monopolizing the greater part of the discussions, both in the journals and at public gatherings. I was just about as nearly infatuated as I ever was, and having leisure to attend to it, I procured all of the printed matter that I could hear of bearing upon it, fitted up a dungeon wherein not a solitary, infinitesimal, or other merest fragrant of light could enter, where, by the light of a "ruby" lantern, that only made the darkness the more dismal and oppressive, I began experimenting. I obtained the best chemicals, Nelson's No. 1 gelatin, and all of the necessary apparatus. I tried first the most plausible sounding formula, and code of directions in my collection, and made a batch of plates. How anxiously I awaited their drying; and then tried one of them, just about no time at all, so as not to "over-expose" it; how pleased was I when development showed an image, even though more than half the film had blistered and was just ready to let go of the glass. That batch was not good, but the next one would be, I thought; so I tried again, and again, and then again, very many, many times. No sooner would I overcome one difficulty than another as bad, or perhaps worse, would arise; but I kept my courage and labored on. Of course I kept changing my methods, trying formula after formula, as they were printed in my books, and when they were all tried I branched out on my own hook. I spent about six months in this way, wrestling vigorously with frills, blisters, streaks, spots, lack of proper printing density, and a host of other similar annoyances before I was able to produce a negative from my dry plates that came anywhere near satisfying myself, or my photographer friends who saw my productions. I was finally able, however, to make a gelatin dry plate upon which I could depend for good negatives, just about every time; and I felt very well satisfied with myself. At this point spring was opening, and as I had made up my mind to work at viewing during the season, I set about getting ready for such work. I had all along thought that my dry plates would be a great advantage in such business, enabling me to dispense with a large amount of *impedimenta*, etc. All of the enthusiasts in dry-plate work said so, and I believed them. My work required two sizes of plates, 5 x 8 and 8 x 10. I got things together necessary to work such plates, *dry*, arranging to expose on the ground, and develop at home at night, or whenever opportunity offered (which, you know, is so *very convenient*, etc.); and I found that I had much more than I could carry in my vest-pocket or sling upon my back, so I procured a handcart and went to work. My plates worked splendidly, but every now and then I would make a miss of some kind. A blind of the house would be open when the owner wanted it closed, or it would be closed when the owner wanted it open, or something else of equal importance would be amiss that would require a new negative. This annoyance became so great that I became convinced that the only way to make the view business a success, was to develop my plates on the ground, as I was not doing business for the fun of the thing entirely. So I rigged my handcart for developing my plates where I exposed them.

By this time I had had abundant opportunity to study and ascertain all of the advantages of the dry plates over the wet, for the purpose of viewing, and I found that there were none. That instead of possessing advantages for my line of work (requiring 8 x 10 plates), they actually were inferior to wet plates in many respects. I hated to admit such fact, and tried very hard not to for some time, but the *fact* was so apparent that I was finally compelled to yield to it, and fit up my handcart for working wet-collodion plates.

The chief disadvantages which I found the dry plates to possess as compared with the wet, in my business, were:

1. The best dry-plate negatives will not produce as fine pictures as the best wet-plate negatives.

2. When developing, when the plates were exposed, the longer time required for development, the miserably poor light necessary to use, and the greater care that must be exercised at all times to keep the plates protected from actinic light.

There were many other disadvantages of less importance, and during warm weather, at least, the dry plates did not offer any advantages, in any respect, worthy of mention. The weight of my handcart was not materially increased by the change from dry to wet plates, and I continued to use wet plates exclusively until cold weather set in in November, when it was so cold that a bath would freeze out of doors. Then, having considerable work still undone, I prepared a batch of gelatin plates, and with them made my negatives, getting very satisfactory results. I did not, in fact, lose a single plate, every one exposed yielding a good working negative. I have sold as many as a hundred, and over, prints from some of the stereoscopic negatives made with that batch of gelatin plates, and I am well satisfied with them.

While insisting that the old wet process is far superior to the new for general business purposes, I think the new process of great value as an auxiliary to a photographer's business, and no man can properly lay claim to the title of professional photographer who does not know how to make and work the new plates.

I propose, in this series of articles, to tell all I know about the process. I shall give minute directions as to my method of working, which is simplicity itself. I do not claim much originality for it, as I have picked it up, a little here and there, and, by experimenting, succeeded in putting all together so as to produce good results; and as I am daily deriving great benefit from the experience of others, in various departments of the profession, as related by them in our periodicals, I wish to do what I can to reciprocate the favor.

This article being already too long, I will defer further writing until next number of the *Photographer*.

THE PLATINOTYPE PROCESS.[*]

BY WILLIAM WILLIS, JR.

I PROPOSE this evening to exhibit a few experiments for the purpose of showing the principles on which the platinotype process is based, and the method now adopted for working it.

I have in each of these test-tubes a little ferrous-oxalate. On dropping into one of them some nitrate of silver, you will see that a precipitate consisting of metallic silver is slowly thrown down. On pouring into another a solution of chloride of gold, a precipitate of metallic gold is slowly formed, and on treating a third with ferricyanide of potassium you will notice a blue precipitate.

You see that ferrous-oxalate has reduced the silver and gold from its salts, and has also reduced ferricyanide of potassium with formation of another salt. Ferrous-oxalate is thus shown to be a powerful reducing agent.

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[*] Paper read before the Photographic Society of Philadelphia, February 3d, 1881.

The question arises, Will it not reduce platinum from its salts? On making an experiment similar to the above, but with chloride of platinum instead of a salt of silver or gold, we see that little or no precipitation takes place. This seems very strange when we consider that many ferrous salts, even ferrous-sulphate, will, under certain conditions, reduce the metal from salts of platinum, and here we have a ferrous salt, the acid component of which is itself a reducer of platinum; for it is well known that if a mixture of solutions of platinic-chloride and oxalic acid be exposed to sunlight the metal will be reduced.

Some years ago I was much puzzled by this refusal of ferrous-oxalate to reduce platinic-chloride, and I was driven to the conclusion, that, in order to get a reduction, it was necessary for the ferrous-oxalate to be in solution. On dissolving some ferrous-oxalate in oxalate of potash and adding platinic-chloride, I found that the metal from the latter was almost instantly reduced, especially if the solution was hot.

We will now try the experiment: Here is a solution of potassic-oxalate; we add some ferrous-oxalate, which quickly dissolves by the aid of heat. Now, on adding a chloride of platinum, you see that an immediate black precipitate is produced. This precipitate consists of metallic platinum. We see from this experiment that a solution of ferrous-oxalate in potassic-oxalate quickly reduces the metal from salts of platinum. On this reaction the platinotype process is founded.

Now, before we can produce a print in platinum, we want the sun to draw for us a picture, using—if I may be allowed the expression—a crayon of ferrous-oxalate. This he will do if we present to his rays a piece of paper coated with ferric-oxalate, in front of which is placed a negative. The action of the light reduces the ferric-oxalate to ferrous-oxalate.

This piece of paper has been coated with ferric-oxalate, and afterwards exposed to light behind a negativ . The faintly visible image produced by the action of the light consists mostly of ferrous-oxalate. You see that the sun has drawn a picture in ferrous-oxalate. Now, on brushing a solution of nitrate of silver over a portion of this image, a picture in silver is formed by the reduction of the silver salt by the ferrous-oxalate, forming the image.

On brushing a solution of a salt of platinum over another portion of the image no picture is produced, because the ferrous-oxalate forming the image is not in a soluble form, and therefore not able to reduce the platinum.

Now, if instead of applying a coating to paper of ferric-oxalate only, we apply a coating containing platinum salt as well as ferric-oxalate, we shall find, on exposing such paper to light under a negative, that only one ingredient, ferric-oxalate, has been acted on; that the platinum salt remains unaltered. We have before shown that the action of the light through the negative forms an image of ferrous-oxalate; but in this instance it should be borne in mind that the platinum salt forming one of the ingredients with which the paper was coated, is intimately mixed with this image of ferrous-oxalate; that is to say, the image here consists of ferrous-oxalate intimately mixed with unaltered platinum salts.

If we float the paper bearing this mixed image on potassic-oxalate, the ferrous-oxalate in the image will of course be dissolved; but we have before seen that the solution thus formed is a reducer of platinum salt. Now as the solution is of course strongest at the point where the ferrous-oxalate is dissolving (that is at the surface of the image), and as the platinum salt is mixed with this image, it follows that if the reducing action be sufficiently rapid the platinum will be reduced *in situ*. To show you that this is really the case, I have here a piece of paper bearing a mixed image of ferrous-oxalate and platinum salt; on floating it on this hot solution of potassic-oxalate, you see that the ferrous image has almost instantly given place to one of platinum.

Having now illustrated the principles upon which the platinotype process is based, I proceed to describe the modifications and improvements which were made in it before it reached its present simple and perfect form.

In the early attempts to form a working process on this basis, many practical difficulties were encountered. It was found impossible to obtain by the use of platinum and iron salts alone anything but granulated and weak images; to overcome this difficulty the paper was first treated with a very weak solution of silver, and then sensitized with a mixture of iron and platinum salts. After exposure and development the image had a muddy appearance, due to the presence of silver, but by placing it in a bath of sulpho-cyanide of gold, the muddiness was removed and gold deposited in its place. Since silver was employed, it was necessary to fix these prints in hypo.

This process gave very beautiful results, which were perfectly stable if proper precautions were taken; but the process required chemical knowledge on the part of the operator, and so much care that it was practically valueless; moreover, the employment of silver, gold, and hypo was quite sufficient to condemn it in the eyes of most photographers.

About two years ago I discovered a method by which all these objectional substances were dispensed with, and the process much simplified. In this improvement, paper was sensitized by a mixture of iron and platinum salts, containing a trace of chloride of lead. The picture after exposure was developed on a hot solution of potassic-oxalate containing platinum salt and then simply washed in acid and water. Prints made by this process were absolutely unalterable, however carelessly produced, and the process was moreover easy to work. It was not, however, perfect. The lead salt introduced into the sensitizer was not removed by the washing, but remained in the paper. In the course of time the action of sulphuretted hydrogen, which is present in the air of all large towns, on this lead salt would give a yellowish tint to the paper on which the print was made, not perhaps sufficient to seriously injure the appearance of the print, but yet enough to sensibly impair its purity and brilliancy.

To overcome this defect, I began a course of experiments in the early part of last year, which resulted in the complete removal of this defect, and moreover gave a process even more certain and simple than the last.

This final form of the process I will now proceed to describe, and afterwards to illustrate by some experiments.

Only three chemicals are made use of; they are ferric-oxalate, potassic-oxalate, and potassic chloro-platinite.

One ounce of the ferric-oxalate solution is taken, and from forty to sixty grains of the platinite salt (potassic chloro-platinite) is dissolved therein. This forms the sensitizing solution, which is applied to the surface of the paper to be sensitized by means of a pad of flannel or cotton-wool. After being sensitized the paper is allowed to become surface dry, and is then perfectly dried by the aid of heat. Exposure to light is made in the usual manner; the visibility of the image enables the correct exposure to be estimated without difficulty. The exposed print is developed in, or on, a hot, nearly saturated solution of potassic-chlorate; it is cleared and washed by being put through two baths of weak hydrochloric or citric acid, and afterwards through three or four baths of plain water.

The following are the only important points to be attended to in working this process:

1. The sensitizing table and pads should be perfectly clean and quite free from all traces of old sensitizer.

2. The sensitized paper should not be allowed to become too rapidly surface dry. From eight to ten minutes is usually sufficient. If the atmosphere be very dry, a damp cupboard in which to hang the paper during this drying period is very useful.

3. The surface-dried paper must be perfectly dried by the aid of heat. This is a very important point to observe, but care must be taken not to scorch the surface, otherwise a gray fogged print will be obtained.

4. The sensitized paper should be kept perfectly dry before, during, and after its exposure to light.

5. The heat of the developer must not be less than 170° Fahrenheit.

The process is easy and very certain in its results, and if these few points be attended to, no one can well fail in working it.

I will now conclude by developing a few prints which I have exposed to-day.

SIMILIGRAVURE:*

A New Process of Phototypography.

BY C. PETIT.

The use of my process comprises two very distinct operations.

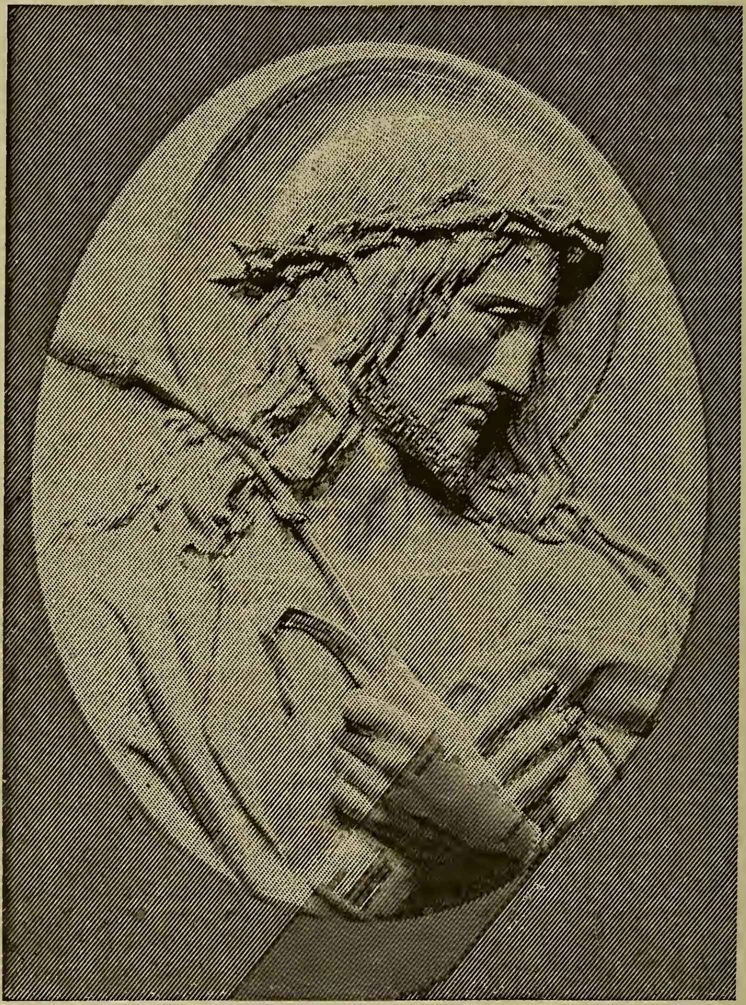
1. The converting of the half-tones into lines.

2. The converting of a line into a typographic relief.

This second portion being well known, I shall treat of the first only.

The *Bulletin de l'Inprimerie,* in an article having for its title "Photo-engraving," and speaking of the process I have the honor to submit to you, said: "We might correctly have styled this article the planing-machine and photography."

Truly, it is the planing-machine that gave me the idea of transforming photographic half-tones into white and black lines, so that they might be printed typographically.



For a long time having been familiar with the new processes due to the discovery of Mr. Poitevin, I had always thought it possible to arrive at a typographic process. From the very start, I abandoned the principle of the chemical grain as being unsuitable for rapid printing. A mechanical appliance seemed to me to answer the purpose, as it allows the use of hand-work to guide the operations.

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* Laid before the French Photographic Society, May 7th, 1880.

This was my theory: A V-shaped tool, in proportion to its penetration into any substance, can produce lines more or less wide; if the body is white and the surface black, the tool will produce white lines, more or less wide, upon a black ground. If, instead of allowing the tool to penetrate, more or less, I fix it at a given height, and the surface to be engraved should be undulating, each undulation in relief will be touched by the tool, and each undulation in intaglio will not be touched. Bichromatized gelatin can give in intaglio and relief the reproduction of a photographic cliché proportionally to the whites, half-tones, and blacks. I conceived the idea of repeating in perfectly white wax the imprint of these gelatins, to blacken the surface with plumbago, and to place the whole under a planing machine, regulating the penetration of the tool, so as to avoid the deep intaglios; regulating the proximity of each passage of the plane by the preceding one. I thus obtained a series of images that proved my theory practical. With the view of further improvements in an industrial point of view, I reversed the operations, and engraved the surface of the wax yet white, and then blackened the surface of the gelatin, and moulded it on this engraved wax.

I showed several specimens to those who were interested in the success of my process. Two observations made to me, proved that I had not yet terminated my experiments. The possibility of retouching and diversity in the cuts were wanting. I again went to work, and succeeded in solving these two new problems.

Retouching seemed to me impossible in a mechanical process, but the contrary was proved to me. The photographic cliché is retouched, and untouched photography to-day would have but little success. The printing with fatty inks would be much more practical if retouching were possible.

I accepted the more readily these remarks, as I felt assured that the solution of the difficulty could be found in changing the support.

For the wax—too malleable, too easily affected—I substituted paper, feeling sure that I would meet the views of advocates of retouching. For the substitution of the paper for the wax, it was only necessary to reproduce in its body the dry impression of the lines which I traced in my wax. The diversity of the cuts followed. With my machine I could only obtain uniform lines, but with paper, all grains and all kinds of cuts could be utilized; by very simple operations, I can produce grained gelatins, suitable for figuring my paper. All the combinations are not reproduced in the specimens that I have the honor to submit to you. I do not yet know how many different kinds of grains may exist, but their number may be considerably increased by combination, as I can laminate my paper two or three times on different grains and in different places.

The specimens submitted represent an antique piece of sculptured ivory, from a negative by Mr. Franck.*

AN AMERICAN PHOTOTYPOGRAPHIC PROCESS.

Editor Philadelphia Photographer.

Dear Sir: I send you, herewith, a phototypographic plate of a line and stipple impression made from an ordinary "half-tone" negative. It is produced by a modification of a process invented by myself nearly three years ago. This process, as I first worked it, has recently been published as original, by Mr. C. Petit, of Paris, and he has been awarded a prize for it, from the French Society for the Encouragement of National Industry.

The process consists of, first, producing a photographic relief (of the character of that employed in the Woodburytype process) from an ordinary "half-tone" negative, and then inking it with printers' ink, and making an impression upon a suitable surface of raised lines or stipple. In the print thus obtained, the body shades of the negative are represented by pure black lines or stipple, as shown in the accompanying specimen. The line or stipple picture thus obtained, may be reproduced by photo-engraving or lithography.

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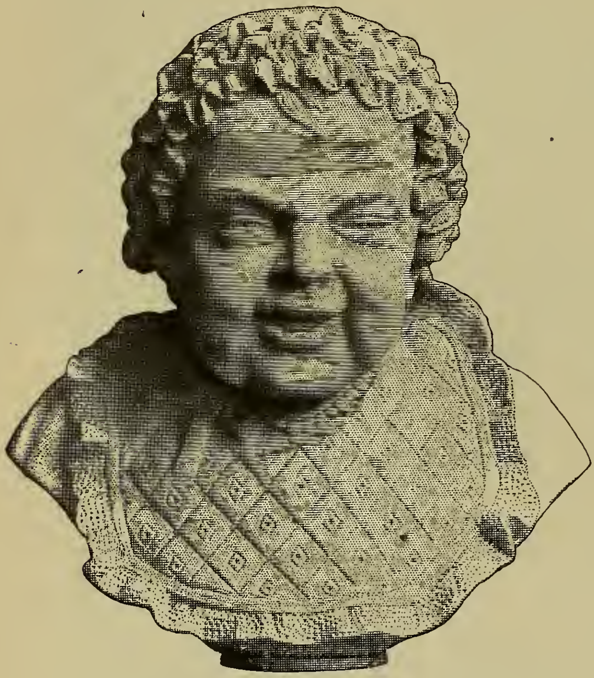
* The specimen presented to our readers is kindly sent us by Mons. Petit, through our esteemed contemporary, Mr. Leon Vidal.—Ed. *P.P.*

This process, as originally operated by myself, and as recently published by Mr. Petit, is not, in practice, sufficiently economical or perfect to give complete satisfaction. The consciousness of this fact led me to delay the publication of my invention until I could make its practical operation more rapid and economical. Without in any way changing the principle of the process, I have made it possible to produce the best results with very much less expenditure of time and material than was formerly required.



I now use a plaster cast from a swelled gelatin relief, and substitute a surface of raised lines or stipple, moulded in printers' roller-composition, for that originally stamped upon paper. It is true, that the relief obtained by moulding from the swelled gelatin, is not, theoretically, quite so perfect as it might be made by the old method, but its faults are almost perfectly compensated for by a peculiar method of producing the impression, and the advantage gained in rapidity and economy is wonderful. What required twenty-four hours to accomplish, may now be done in two. It is quite possible to make a negative from nature in the morning, and produce from it a plate for typographic printing ready for use in the afternoon, without the assistance of either draughtsman or engraver.

In producing the inked impression, it makes no essential difference in the result whether the ink is applied to the photographic relief or to the line or stipple surface, but the latter method offers the advantage, that if the line or stipple surface is elastic, it may be employed in the production of a great many different pictures when the reliefs are white, while by the first method it is necessary to have a separate lined or stippled surface for each picture.

In order to reproduce comparatively minute details in a satisfactory manner, the reproduction must have not less than one hundred lines to the inch, and the details will be better defined when there are lines running in both vertical and horizontal directions.

I have produced, essentially, the same result by a variety of methods, all, however, depending upon the use of a photographic-gelatin relief and a surface of V-shaped lines, or a V-shaped tool, or a pen. At present the method described has advantages over all the others, and its publication will be reserved until it is further developed.

A patent has been granted to me for the process described. Crosscup & West hold an exclusive license to work it, and are perfecting facilities for pushing it. It is believed that, for some kinds of work, it will eventually supersede all other methods. The specimen which I furnish, while it serves to illustrate the method, will not compare favorably with results which will soon be obtained.

FRED. E. IVES.

PHILADELPHIA, PA., February 19th, 1881.

OUR PICTURE.

IN our issue for November, 1879, we presented as our embellishment a very beautiful picture called "The Wash-house," taken from one of Mr. L. Solon's exquisite *plaques*, owned by Charles Sharpless, Esq., of this city.

Thanks to the talent of the same artist, and the liberality of the same owner of the *plaque*, we are enabled to present now a companion picture, which is named "The Kitchen."

It is not only a lovely work of art, and a superior one of its class, but it is full of humor and pathos, and a little of humanity as well. As an art-study it is also valuable to us all, and well worthy of attention.

The process by which Mr. Solon produces his *plaques* was given with the picture of "The Wash-house."

The copies and prints were made at our own rooms, and we used Messrs. Trapp & Münch's excellent albumen paper.

Next month, to start the landscape season, we shall present a beautiful view in "Old Ireland."

A FEW HINTS WORTH KNOWING TO WORKERS OF DRY PLATES.

BY CRAMER & NORDEN, ST. LOUIS.

THE formulæ for our extra-rapid dry plates having been published in your February number, we wish to recommend to all professional and amateur photographers who have experimented with dry plates and met with trouble, to try the iron development as given in our directions. It is so simple and easy to manage that anybody of common sense can work it successfully, and does away with the many bottles and continued measuring of the developing solutions which take so much time and attention with the alkaline development. The iron is more economical and works fully as quick, and the negatives obtained thereby resemble very much the ordinary collodion plate. Furthermore, there are no fumes of ammonia created in the dark-room, which are so injurious to the silver bath.

If a negative developed by iron is treated with a *cold* mixture of eight parts water and one part sulphuric acid after fixing and washing, it will be much improved in clearness.

Negatives developed by pyro. have sometimes a yellow color which makes them print slowly; this can be readily removed by pouring on water containing twelve drops of nitric acid per ounce.

FRENCH CORRESPONDENCE.

Process of Mr. Christian—Possibility for all to Use a Positive Printing Process by Development—Process for Printing with an Iron Salt, Giving Black Lines on a White Ground—Some New Experiments with Selenium.

WHEN, about two months ago, Mr. Christian announced in his circular that he had discovered a process of very great rapidity for printing positives without the aid of any light, we entertained very great doubts in regard to the absence of some source of light, and we were right, as the facts have just shown.

Mr. Christian has since formed a co-partnership with Mr. Liébert, and the affair that he was trying to organize now assumes a more serious aspect. There is now no longer question of suppressing light, but, as we have said and advised some time ago, of using an artificial light for printing positives on gelatino-bromized paper. A few seconds suffice for this printing. The development is made with an iron salt, and here the formulæ may vary *ad infinitum*. After thorough washing, fix with hyposulphite and then tone, in order to give to the print a more or less photographic appearance, if it should be judged necessary. This question of formulæ for developing and toning bath is not of much interest, as every one can decide on the formula which suits him best. Messrs. Christian & Liébert, in working their process, only give to the purchasers of licenses the formulæ which they employ.

In regard to the preparation of the sensitized paper, it is very simple; and, as we think, by coating by any suitable means, paper of good quality with gelatino-bromide emulsion. The proportion of water in this preparation should be greater, we think, than in the emulsion which is used for preparing negative plates. The development is very quickly done, six or eight prints at the most are used, so as to watch them carefully, and each print is placed in the water as soon as it acquires the desired intensity. By a longer or shorter development is it possible to remedy an exposure which has been relatively too long or too short. The time necessary for making a print being from five to ten seconds, it is easy to see with what rapidity some hundreds of prints may be obtained. Thanks to such a process, it is possible in the evening, after the day's work is over, to print all the negatives made during the day, and deliver on the next day all the orders, if desirable, whatever may be the number of prints required from the same negative.

The prints thus obtained are very fine in their details, but less brilliant than those on albumen. If it is desired to make prints similar to those on albumen, it is necessary to coat the surface with a thin varnish of white gum lac dissolved in borated water. This varnish is very solid; it does not become yellow or resinous, and offers besides the advantage of guaranteeing the preservation of the prints, since it renders the paper impervious to water.

We hope that a process of this kind, which offers so many advantages, will soon come into general use. It may be urged against its general adoption that the price asked by Messrs. Christian & Liébert for divulging the mysteries of their process is very high. This, we think, is a mistake, as we find here nothing new or mysterious. All who wish may make use of it, provided they ask nothing from Messrs. Christian & Liébert, and that they seek for themselves. The thing is so easy, that we cannot entertain a doubt that this process will soon be worked by many, either by obtaining it from the above photographers, or that, outside of them, suitable formulæ have been found.

Mr. Stebbing, it appears, has already found a process well balanced in all its phases, and giving complete results with a very short exposure and a very weak artificial light. This does not astonish us, and the contrary alone would surprise us.

In England, several photographers are working this process, and, in our opinion, the success will be greater for the manufacturers who sell the sensitized paper already prepared for those who may desire it, than for those who sell it to holders of licenses. We cannot understand the advantage of selling licenses, except in the case of a patented process, and one worthy of being patented; or of preparations so secret in their nature that it is impossible to discover similar or analogous ones.

This is not a case in point, but Messrs. Christian & Liébert will always be entitled to a certain amount of gratitude for having largely contributed to the introduction of a process among us, in professional practice, which is soon destined to occupy there a very important place.

We take from one of our highly esteemed scientific publications, *The World of Science and Industry*, the following process for reproducing line-drawings in black on a white ground: First float a sheet of white paper for three minutes on the following bath:

Sulphate of Peroxide of Iron, . . .	20 grms.	(5 drms. 8 grs.)
Perchloride of Iron, .	20 centigrms.	(3 grs.)
Gelatin, . . .	20 grms.	(5 drms. 8 grs.)
Tartaric Acid, . .	20 "	(5 " 8 ")
Water, .	330 grms.	(10 oz. Troy, 4 drs. 42 grs.)

Dry this paper in *obscurity*, and expose in a frame as usual. The time of exposure is twenty-five minutes in the sun, and some hours in diffused light. After exposure, the sheet is plunged, by lamplight, in the following bath:

Gallic Acid, . .	2 grms.	(31 grs.)
Alcohol, . .	5 "	(1 drm. 17 grs.)
Water, . . .	200 "	(6 ozs. 4 drms.)

Now wash in pure water, and allow to dry. This process is especially very useful for reproducing drawings and plans, these last made on dioptic paper, with a very opaque ink, and used themselves as clichés. In this case a positive gives a positive.

Continuing our investigations in the making of a selenium photometer, we have reached the conclusion that it is possible to get up in a very simple manner an appliance of this kind, to be used either in chemical laboratories, or for meteorological observation, or in photographic operations. But we must make a distinction between this new photometer and all the actinometers now existing. These last measure not the lighting power, but the chemical action of light. Now, in a photographic point of view, the lighting power is of little use unless it can lead to a corresponding knowledge of the chemical action. This correlation exists, and this is what we are now studying, so as to be able to form tables in which opposite each degree of lighting power will be found its degree of chemical action. This investigation offers some difficulties, and for this reason. The lighting power may be of such a character, in certain cases, that it will be necessary to compare it, either with the chemical action of the same degree, for example, or with one having little or no energy. In reality, the selenium photometer is affected by the luminous action, whether this be of white light or red and yellow light; whilst an actinometer of chemical action, marking a high degree of luminous intensity by an action produced by white light, will indicate an action of little or no energy for the same illuminating power of this light, but reduced to the red and yellow rays.

It is possible to understand, from what precedes, the nature of our investigations and their very interesting character. We will publish them from time to time, as soon as anything new is found, with the intention, however, of giving later to the public the whole of these experiments in a publication containing the numerous observations which it admits of.

LEON VIDAL.

PARIS, February 1st, 1881.

Editor's Table.

WALLACE'S ALBUMEN-PAPER COMPANY, London, advertise their newly improved paper this month. They claim that it will keep for months after sensitizing, and that it has a surface almost equal to double print. The samples we have tried print vigorously, and with great rapidity, and the detail and shadows are remarkably preserved, whilst the tones are of unusual depth and richness. We believe a large market can be made for it in America.

OUR cover outline this month is of a pretty child picture, from Mr. LEE STEARNS, Wilkesbarre, Pa. It is a mere suggestion of the original, and does not begin to give a full idea of its sweetness. It was accompanied by two others of the same child, in varied positions, all of which are fine examples of photographic *art*, upon which Mr. STEARNS can well be congratulated.

MR. S. G. NIXON, 813 Arch Street, Philadelphia, whose card appears in our "Specialties" column, is one of the best crayon artists in our city. We have seen a great deal of his work, and gladly commend him to the trade. He has been established since 1867.

PICTURES RECEIVED.—From Mr. WM. H. KIBBEE, Johnstown, N. Y., samples of plain cabinet work, showing good lighting and careful manipulation throughout. Two little girls in a snow-storm make a very sweet composition. Mr. GEORGE E. MELLEN, Gunnison, Col., sends us a number of stereoscopic views of wild bits of scenery, groups of miners, and views of his own camp while out on his photographic excursion. A view of an enormous snow-bridge spanning a wild mountain cascade is extremely fine and really wonderful. Mr. W. G. MANN, operator for A. SCIDMORE, Appleton, Wis., sends several cabinet-bust pictures of ladies, gentlemen, and groups. Mr. MANN is young in the business, but growing rapidly, judging by the samples now before us. Two panel pictures from Mr. W. L. BATES, Denver, Col., in which are introduced the initial backgrounds, a novelty in his line, brought forward by Mr. L. W. SEAVEY, at our late Chicago convention. Mr. BATES is never behind in adopting any improvement that will tend to please his customers, or facilitate the carrying on of his large business. A Denver local paper gives quite a lengthy description of Mr. BATES' elegant rooms, averring positively that this is the finest photographic establishment west of Chicago. The city is justly proud of Mr. BATES, and the fine work he turns out is full compensation for the good opinion of his customers and patrons. A very pretty New Year's card from Mr. A. J. W. COPELIN, Chicago, Ill., having a portrait of himself on the left-hand end, partially surrounded with ferns and flowers, also his autograph and "A Happy New Year." From Mr. E. D. ORMSBY, Oakland, Cal., a full-length portrait of a young lady. The pose is full of grace and ease. See our cover. Mr. F. CLARK, Pittsfield, Mass., sends several samples of his card, cabinet, and panel pictures. The lighting is good and the positions natural. From Mr. W. WYKES, Grand Rapids, Mich., several cabinet portraits of ladies, one graceful girl being variously posed in the statuary style. Several beautiful examples of photography from Mr. MILTON T. CARTER, Worcester, Mass. Mr. CARTER's method of lighting is unusually fine, and gives the most charming results. An Italian girl with a violin in her hands is a *real picture.* The most amusing picture this month comes to us from Mr. R. GOEBEL, St. Charles, Mo., in the form of a card picture of a little girl about two years of age. The little lady grasps a dinner-bell in her hands with the most determined air of not allowing it to make a tinkle, while her own face with open mouth gives the idea that she is giving vent to the loudest outcries. Mr. GOEBEL has added to the fun of the picture by placing over the child's head this legend, "I don't want to be *tooken.*" Mrs. E. N. LOCKWOOD, Ripon, Wis., sends us a number of interesting stereoscopic views of the various rooms in her well-appointed photographic establishment, also some pretty bits on Green Lake, Wis. It is a well-known fact that in addition to their gallery, Mr. and Mrs. LOCKWOOD own a beautiful little photo-steamer which they have named the "Camera." The vessel appears in two of the lake views before us, with a well-arranged group on the shore. Another view is taken from the deck of the "Camera." Mr. JAMES E. GAUSE, Durhamville, Tenn., sends us some interesting cards of children. THORS, San Francisco, Cal., sends a number of cabinet samples of his work. The lighting, and entire photographic manipulation, are extremely fine throughout, and well worthy of the highest commendation. Mr. E. D. ORMSBY, Oakland, Cal., and Mr. WELL G. SINGHI, Binghamton, N. Y., each send us a cabinet of their every-day work, both showing the superior qualities which always predominate in the handiwork of these gentlemen. Mr. H. B. HILLYER, Austin, Texas, sends us three cabinet pictures, showing care and good management in every part of the work.

MESSRS. BENJAMIN FRENCH & Co., Boston, send us a copy of their new "Illustrated Catalogue of the Celebrated Voigtlander & Son and Darlot Lenses," for which they are *sole agents for the United States.* In our estimation, this is the best arranged catalogue ever issued by the firm. It opens with an index as follows: Voigtlander & Son's Portrait Lenses; Remarks on Selecting Lenses; Supplementary Back-Lenses; Euryscope Lenses; Wide-Angle Euryscope Lenses; Darlot Gem and Portrait Lenses; Darlot Hemispherical View Lenses; Darlot Rapid Hemispherical View Lenses; Darlot View Lenses; Stereoscopic Lenses (imitation Dallmeyer); Condensing Lenses; Central Stops, Caps, and Flanges. We would call especial attention to "Remarks on Selecting Lenses," on pages 6 and 7. This instructive little article should be read by every one before selecting a lens. Send for a copy, free to all, to Messrs. BENJAMIN FRENCH & Co., 319 Washington Street, Boston, Mass.

A NEW ADVERTISEMENT FROM AN OLD AND WELL-KNOWN FIRM.—Our readers will be glad to see the advertisement, on another page, of Messrs. GEORGE KNELL & SON, No. 226 South Second Street, Philadelphia, a house whose name is familiar to old photographers as the headquarters for obtaining the various styles of position chairs, pedestals, stands, etc. This firm is now offering several new models in these goods, and our readers will do well to refer to them before purchasing for their Spring refurnishing.

A WARNING.—We would hereby give notice to our readers in regard to a fraudulent fellow who has been travelling about the country under the name of STEVENSON, and collecting pictures for copying and enlargement. Further particulars, and picture of the impostor, can be obtained by applying to Mr. T. D. SAUNDERS, Lexington, Mo.

A CARD.—We noticed, in a former issue, the intended dissolution of partnership between Messrs. GATCHEL, HYATT & MULLETT, the last named member of the firm having sold out his interest to Messrs. GATCHEL & HYATT. Mr. R. B. MULLETT desires to inform his friends, by this medium, of his intention of entering into business with his brother, Mr. FREDERICK MULLETT, the well-known stock-dealer in Kansas City, Mo.

OUR esteemed friend and cotemporary, Mons. LEON VIDAL, Paris, France, writes as follows:

"Let me not close this letter without complimenting you on your *handsome journal*, so well printed, so interesting. We could not produce here anything in such luxuriant style. These numbers bound make, annually, two handsome volumes." LEON VIDAL.

THE *Photographers' Bureau of Information* for January, is to hand. The number before us completes the first year's issue of this valuable little leaflet. May it survive and flourish for many prosperous years, with its enterprising publishers, Messrs. DOUGLASS, THOMPSON & Co., dealers in photographers' supplies, 229 and 231 State Street, Chicago.

MESSRS. BLESSING & BRO., Galveston, Texas, send us their large "1881 Wholesale Illustrated Catalogue and Descriptive Price List of Photographic Goods, etc." The book is furnished with an index, alphabetically arranged, which is of the utmost convenience in connection with so large a catalogue as the one before us. It is a seventy-two page book, profusely illustrated with excellent engravings, and describes every requisite for picture making, and finishing, even to the nails and cords for hanging it, besides many other artistic adornments for making homes beautiful and attractive.

WE take pleasure in directing the attention of our readers to the advertisement, on another page, of Mrs. CLARKE, 561 Druid Hill Avenue, Baltimore. This lady's work has been most favorably criticised, and the testimonials she offers, from her former patrons in England, are very flattering; added to this, the reasonableness of her prices should commend her to those who have coloring to be done outside their own rooms.

MR. H. C. BELLSMITH (formerly of the firm of SAMO & BELLSMITH) has lately entered into partnership with his brother, Mr. R. P. BELLSMITH. These gentlemen will continue business at their rooms, 460 Main Street, Buffalo, N. Y., under the name BELLSMITH BROS. The new firm have our best wishes.

OUR readers will be glad to know the old-time solar printing establishment of Messrs. CHARLES PAXSON & BROTHER will continue to do business at the old stand, 612, 614, and 616 Broadway, New York, the junior partner, Mr. I. PAXSON, having assumed control of affairs. All orders should be addressed to Mr. I. PAXSON. See advertisement on another page.

THE "Chicago College of Photography" is now being founded by our enterprising brethren in that city. It is, as its name would imply, intended to educate men in the science and practice of photography. Its list of officers and trustees is composed of the names of the leading photographers of Chicago. The first session will open in April and continue three months. This is calculated to fill a great want in photography, and the institution has our heartiest sympathy and warmest wishes for its permanent prosperity.

MR. B. FRANK SAYLOR, Lancaster, Pa., sends us a copy of his little four-page publication, *Camera and Pencil.* The present copy is No. 1, Vol. I. The publisher aspires to issuing his paper quarterly, but at present he prefers to be non-committal in the matter.

THE SCOVILL MANUFACTURING COMPANY'S button-shop, Waterbury, Conn., was completely destroyed by fire on Sunday morning, February 14th. By the exertions of the fire companies the brass-works and other adjacent buildings were saved.

THE *American Trade Journal* gives a very pleasing description of JAMES F. BARKE, the leading photographer at Council Bluffs, Iowa.

THE *Civil Service Gazette*, London, England, gives a long description of the career of Mr. J. E. MAYALL, of Brighton, England, whose latest departure has been to utilize electric light in his studio for making pictures.

A very flattering notice is also made of his recently fitted-up studio.

MOSAICS, 1881.—The extra large pile is being reduced, and soon we will have to answer "all gone." Read the advertisement—reflect—remit now.

MESSRS. ELMER & TENNEY, Winona, Minn., send us a copy of the Winona *Business Directory*, in which their names are displayed very handsomely, occupying the entire space of second page of cover.

ROBINSON'S PICTORIAL EFFECT is meeting with a successful sale, and seems to please and profit all who write us about it. It is a book every photographer should carefully study.

The Noteworthy Picture comes to us this month from our friend Mr. H. Rocher, Chicago, Ills. It is an elegant bust vignette of the famous Miss Mary Anderson; in size, 10 x 16 inches, mounted on a heavy gilt bevelled black panel. The lighting is in that style so long known as the "Rembrandt." But the greatest charm of the picture, in photographic eyes, lies in the fact that it was made on a gelatin dry-plate. Like all Mr. Rocher's pictures, the one in question is beautiful in every detail, exquisitely finished, a true gem in photographic art. Already it has attracted unbounded notice in all circles where such work can be appreciated. Mr. Rocher writes us that his orders for this beautiful portrait have been large and general, besides a long list still waiting to be filled.

Mr. J. C. Somerville, St. Louis, Secretary of the Eureka Dry-Plate Co., sends us several cabinet portraits made by Mr. F. W. Guerin, St. Louis, on Eureka Dry Plates. The pictures are most excellent, and, by an ordinary observer, could not be distinguished from work done by the ordinary wet process. Truly this is a triumphant step forward for the science of photography, and we are now more confident than ever as to the future of dry-plate work in the skylight. Mr. Somerville has kindly furnished us with full directions for working the Eureka Dry Plates, which will be found on another page. The paper was received last month, too late, however, for publication.

The *Photographic Times and American Photographer*, as we announced in our last issue, has now appeared as an independent magazine, devoted to photographic matters. Through the enterprise and liberality of its publishers, the Scovill Manufacturing Co., our readers are, no doubt, familiar with the *Times* in its new dress, as a copy was forwarded to every photographer whose address could be reached. There is much that is fresh and bright in its pages, and we predict a prosperous future for the *Times* under the hands of its new and able editor.

We repeat the offer made in our last issue, viz., to club with the *Times*, and for fifty cents extra, our readers may have the privilege of obtaining a $2.00 publication for one year. Remember the *Photographic Times* is $2.00 per annum, *with the Philadelphia Photographer*, $5.50, thus enabling you really to get the *Times* for *one-fourth its regular price.*

The Rome, N. Y., newspaper gives notice of the dissolution of the firm of Hovey & Brainerd, the leading photographers of that place. Mr. J. S. Hovey, after following the art for nearly forty years, now retires, leaving his son, Edward P. Hovey, to take his place; he, with his father's former partner, will continue the business in the old establishment, endeavoring to maintain the high reputation which the firm have so justly earned.

Messrs. Tyler & Bugbee, Waukesha, Wis., send us their New Year greeting in the form of a very tasteful card. The groundwork is of a soft gray; on the left-hand end is the New Year, just hatched and springing from the broken shell. At the top of the card is "A Happy New Year, 1881," and below this the name of the firm. Altogether a very unique design for a card.

From Messrs. Charles Cooper & Co., New York, their four-page price-list of photographic chemicals has been received.

We have received from Mr. T. H. McCollin, Philadelphia, Pa., his usual monthly *Price Current of Photographic Goods.* In addition to the stock lists, we notice several very good short articles which greatly enhance the value of the catalogue to the recipient.

From Mr. James Mullen, Lexington, Ky., their catalogue of views of "Bridges and Picturesque Scenery on the Cincinnati and Southern Railway." The list comprises about one hundred and fifty views of the above section, ranging from stereo. and cabinet to large size.

We have received specifications of patent granted to Mr. W. F. Ashe, New York, on his new photographic accessory, a movable pedestal. The general plan is similar to that invented and published by Mr. Singhi last year, though the one is not an infringement on the other, and both are equally useful.

Dry-Plate Prints.—Mr. C. F. Moelk, operator for F. W. Guerin, St. Louis, Mo., sends us some very fine samples of dry-plate prints. They are full of depth, detail, and richness of tone, fully equal to the best prints from the old wet-plate methods.

We are glad to learn that our friend, Mr. J. E. Beebe, late Secretary of the Chicago Photographic Association, has been raised from his old office to that of first Vice-President. We congratulate him on his new honors. The Association has lost a good Secretary, but gained an able Vice-President.

WILSON'S
PHOTOGRAPHICS

THE ABOVE IS THE TITLE OF THE NEW

PHOTOGRAPHIC LESSON-BOOK

(ANNOUNCED SOME MONTHS AGO)

BY EDWARD L. WILSON,

Editor of the "Philadelphia Photographer."

Price, $4.00.—BOUND IN CLOTH, GILT—Price, $4.00.

And printed on the same paper which this is printed on, made specially for the work by the Jessup & Moore Paper Co., Philadelphia.

For the BEGINNER! For the AMATEUR!! For the PHOTOGRAPHIC WORKER!!!

IT IS BELIEVED TO BE

MOST COMPLETE.

CONTENTS.

Lesson
- A. Treatment of the Subject.
- B. The Needful Apparatus.
- C. The Objective or Lens.
- D. The Dark-Room.
- E. Preparation of the Glass.
- F. Chemicals and Solutions.
- G. The Manipulations.
- H. Manipulatory Miseries.
- I. Retouching the Negative.
- J. The Glass Studio.
- K. Backgrounds, Accessories, and Lighting.

Lesson
- L. Managing the Model.
- M. Printing on Albumen Paper.
- N. Printing on Plain Paper.
- O. Printing on Various Surfaces.
- P. Art in Printing.
- Q. Printing Perplexities.
- R. Mounting and Finishing.
- S. Photography Outside.
- T. Bromo-Gelatine Emulsion Process.
- U. Assorted Applications.
- V. Peculiar Processes.

And so on.

The effort has been made to produce just what the photographer needs in his daily work. It is beautifully and elaborately illustrated; contains, among other things, two full page photo-engravings of examples in position and composition (six each), and a phototype, by Mr. F. Gutekunst, of Miss Adelaide Detchon, in eleven different attitudes. Added to these is a cabinet phototype of the author of the book.

On an original plan, the "whole story" of our art in every department is told, accompanied by elaborate foot-notes, extracted from the best of the writings of co-laborers all over the world, gathered during an editorial career of nearly eighteen years. Thus the best thoughts by the best authorities are secured on every subject.

(OVER.)

Wilson's Photographics

Will contain nearly 100 illustrations, and about 300 pages of the size of this.
This is a sample page of the size and plan of the book.

142. The Fixing Solution.—Still, the beautiful, delicate image which the developer brings forth would be fugitive, and disappear when exposed to the light, were not a fourth solution appealed to to *fix* it. This may be a saturated solution of hyposulphite of soda in water, or of cyanide of potassium, say one ounce to six ounces of water. The last is a deadly poison, and should never be used. The "hypo." solution should be changed frequently to avoid the creation of pin-holes upon the plates. The old, used solution contains considerable silver, and should be saved and sent to the refiner for reduction.

143. The Intensifier.—We now have the four prime solutions or mixtures with which to make negatives; but as variations in light, temperature, atmosphere, and subject cause the chemicals to vary in their action, we must provide us with a further mixture to meet emergencies. This we call the intensifier. If, from over-exposure or any other cause, there is insufficient contrast between the lights and shades, the printing quality

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142. This matter of the principle on which the fixing capacity of the hyposulphite depends is one that is scarcely as generally understood as it should be. Be this as it may, its importance would justify any amount of repetition. Photographers are perhaps too often disposed to think that, from a given quantity of hypo., they have a right to exact a given amount of work, no matter when they happen to be ready to require its performance, forgetting that a fixing bath begins to change from the first moment of its use, and continues to do so until gradually its silver is finally precipitated as black sulphide of silver.—M. Carey Lea.

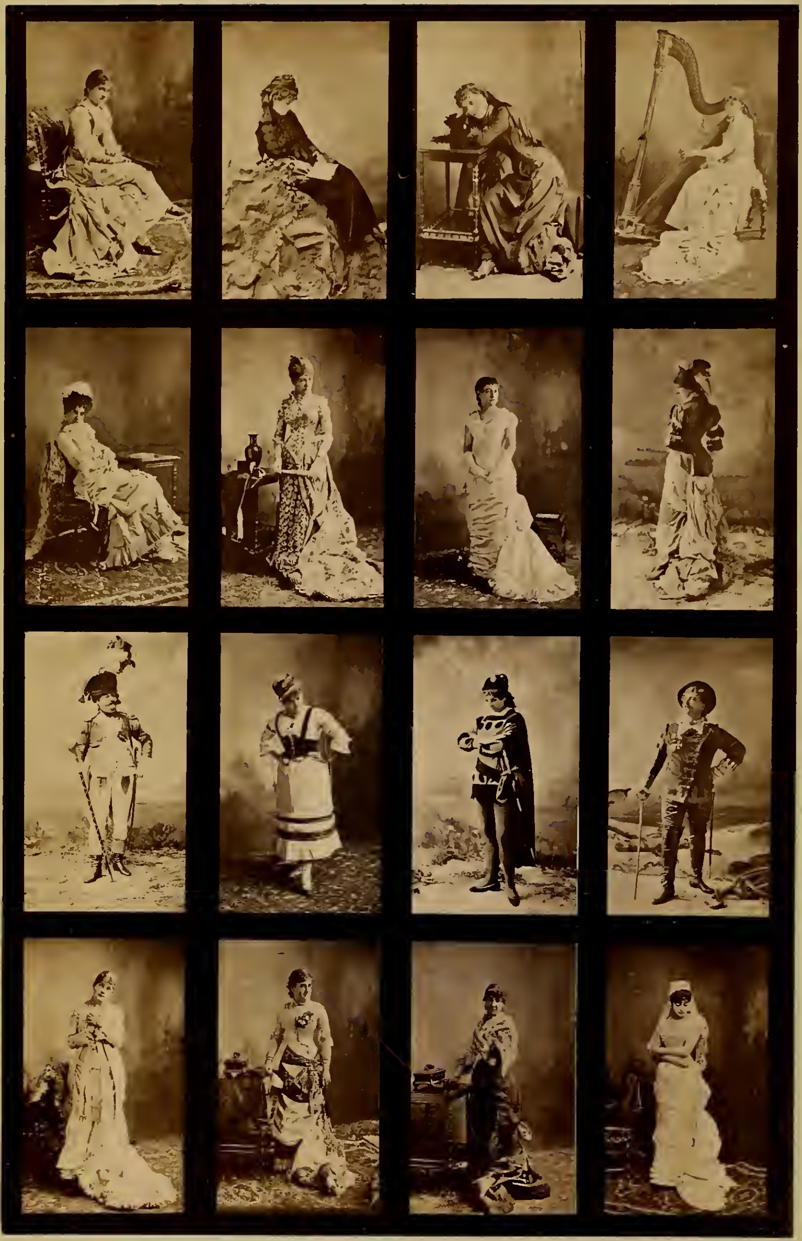
143. When a negative properly exposed is developed, and all the details are properly rendered, we have a picture in which there is a complete scale of light and shade. That it is too feeble to print does not affect this principle. But, as soon as we begin to intensify this, we increase the amount of the lights, leaving the darks of the picture unaltered. We thus entirely alter the scale of light and shade, and often make what would have been a quiet, harmonious negative, a harsh and discordant one. One of our great defects is that we treat all faces and subjects alike. If the face is finely moulded and will bear being brought into high relief, we can well bring it up into strong light; but it would often be better to keep it in low half-tint. This is now being done much more frequently than heretofore, and we can only hope that the practice may be extended to our ordinary work —J. C. Leake.

I do not, as a general thing, believe in intensification, but we all get caught up sometimes, and are compelled to resort to it. Take a saturated solution of bichloride of mercury, add to it a saturated solution of iodide of potassium until all the iodide of mercury is taken up, and the solution is clear again; use two or three drops of this in one ounce of water for intensifying. Should a negative become too intense, it may be reduced again by a weak solution of cyanide. No abrupt chalky lights result from the use of this intensifier, and it will bring out wondrous detail in the shadows hardly suspected before. Wash well, and do not make the negative any more intense than you desire to have it after varnishing, as the varnish will reduce it but very little.—R. Benecke.

Please read future circulars and advertisements. Sent post-paid, on receipt of price, by any stock or news-dealer, or by the publisher, $4.00.

EDWARD L. WILSON, 912 & 914 Chestnut St., Philadelphia.

(OVER.)



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STUDIES.

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THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. APRIL, 1881. No. 208.

STUDIES FOR THE ARTIST PHOTOGRAPHER.

OUR PLAN OF SUPPLYING THEM.

FROM all quarters, and various countries, we have been congratulated upon our plan of supplying the photographers of the world with the best examples in lighting and posing for their study and imitation. "Much good will be done," says one; "Those twelve studies by Mr. Rocher have been worth twelve dollars to me already," says another; and a third declares that he devoutly "wishes every picture for 1881 would comprise just as many more such splendid helps as those in the *Philadelphia Photographer* for February."

One of the most admiring of all is our esteemed contemporary and correspondent, Mons. Leon Vidal, who has a high appreciation of art as found in *our* art, and who is the leader among the laborers for photography's welfare in France. Upon communicating our plan to him, he answers us thus: "I will go armed with your letter and your February number, in which there is such a beautiful picture, to ask from our principal photographers some panel cards, in order to send them to you. I will see Nadar, Wallery, Liebert, Joliet, Detembanche, and Penabert, in order that you may present your readers with an interesting collection from Paris."

In the Paris *Moniteur de la Photographie*, of March 1st, 1881, of which Mons. Leon Vidal is the able editor, we find also the following:

"*Photographic Mosaics*, which Mr. Wilson, editor of the *Philadelphia Photographer*, publishes with so much care, has just reached us; this publication is replete with valuable information, and we will prove this to be the case by making some extracts from it.

"Since we refer to the *Philadelphia Photographer*, we must not forget to give praise to the editor for the happy selection and excellent execution of the various specimens contained in each monthly number of his journal. The last number, notably, that of February, contains a mosaic print, reproducing twelve panel cards, naturally much reduced in size, as altogether they are contained in a cabinet size print.

"The negatives of these prints were made by Mr. Rocher, a Chicago photographer, and they offer a series of well-studied portraits, which can serve as models for photographers, either for the exposure or lighting.

"Mr. Wilson proposes to reproduce several studies of this kind, and we are now collecting for him specimens from our first photographic establishments, with which he can form a combination picture representing the *best work* in French photography.

"LEON VIDAL."

So it will be seen that we are soon to treat our patrons with a "mosaic" made up of the work of the French masters in our art.

Dr. Vogel promises us a similar treat soon from Prussia, and Dr. Horning is expected to hold up our hands in this matter by sending us a fine collection from Vienna. Meanwhile, please profit by those we give you this month and in our February issue, and let us know if they do you any good; for if we have blundered in our plan, we must change it at once.

VOICES FROM THE CRAFT.

THE VALUE OF NEGATIVES.

THE question has often occurred to me while taking an inventory of my gallery, "What is the proper value to put upon negatives, say for 4-4, cabinet, and card size?" I have always counted them, but never could decide about what value each would be allowed by insurance companies in case they were destroyed. It seems to me it would be of great interest to the photographers in general to have this matter discussed through your valuable journal, and ask those who have been burned out to give the price that they were allowed by the settlement of their loss on each of the different sizes of retouched negatives. Also, what do photographers in general put down on their inventories as the value of prints, say, 18 x 22, 14 x 17, 4-4, cabinets, and cards? This is quite a difficult thing to do, to figure out what they are worth; but if they were burned, I would like to have the general opinion of the trade as to what they are worth—I mean first-class negatives and prints. I believe we ought to have it generally understood that each size should be valued by the profession at a set price, so that we should get more than a few cents each for our fine samples, of which most of us have a large number.

F. W. OLIVER,
Oswego, N. Y.

[We should be glad to have this matter discussed in our pages.—ED. *P. P.*]

A WELL-PAID AND PAYING SUBSCRIBER.

FRIEND WILSON: You think that sounds strange, I know; but no matter; for sixteen years you have called monthly in the shape of the *Philadelphia Photographer*, and each visit has been one of profit to me, so I take the liberty to say "friend." I am doing a good business, and that is evidence that I must be doing *fair* work at least, and I am indebted to you, in a great measure, for my prosperity. But, aside from this, it (the journal) has kept me from investing in many a worthless humbug, and had I listened to its advice, I might have saved over five hundred dollars on the carbon process. So you see, taking all things into consideration, I cannot *afford* to do without it.

D. P. BARR,
San Antonio, Texas.

WRINKLES AND DODGES.

HEADING OFF THE SUNLIGHT.

AS spring is drawing near, and we soon have to think of the best mode of keeping the direct rays of the sun out of our studios, I will here describe the way I fixed my light last year, and it worked very satisfactorily to me. I made a thin paste of gelatin, added a small amount of whiting; don't know the exact proportion, but enough to show the whiting prominently; also added a trifle of ultramarine blue, merely enough to give it a slightly bluish tint. This mixture I applied *warm* to the glass of the skylight with a mounting brush. It keeps the direct rays of the sun out, and does not turn yellow in the course of time, like tissue-paper, and is more transparent. If you get it on right, it will remain so all summer. In the fall of the year you can remove it very easily with a sponge and water.

H. W. IMMKE.

A STRONG INTENSIFIER.

THE following is an old and half-forgotten formula for the strongest known re-intensifier for line work:

Sulphate of Copper, .	4 drachms.
Bromide of Potassium, .	2 "
Water, ...	9 ounces.

Bleach, and flow with a twenty-grain silver solution. Let the silver solution rest on the plate for half a minute.

An alcohol varnish is apt to reduce the intensity. A better varnish will be

Benzine, ...	1 pint.
Gum Dammar, about .	2 ounces.
Gum Mastic, ...	1 drachm.

KARL KLAUSER.

HOW TO EMPTY A BATH.

IN the *Mosaics* ways are given to empty bath dishes without spilling the solution in pouring it. The best and simplest way I have ever used or heard of, is to cut a piece of gum paper and stick it on the top edge of the bath, and when it is dry, a little at a time, or all at once, can be poured out without spilling a drop. I have worked at the picture business seven years and over, and just discovered the above simple way in the last two months. Try it, and give it to the public through the *Philadelphia Photographer*, if you think best.

C. W. TERPENING.

GERMAN CORRESPONDENCE.

The first Electro-photographic Studio in Berlin—Acid Development and the Modern Highly Sensitive Emulsion Plate—Dr. Vogel's Emulsion—Decomposition of India-rubber Solution Through Light—Vienna Exhibition—The first Inventor of Photography—New Voigtlander Lens—Influence of Ammonia and Time on Sensitiveness.

BERLIN has a new sensation, and that is the first studio furnished with electric light and opened by a Mr. Van Ranzelen. The studio possesses a Siemen's light-machine, of two thousand candles strength, worked with a gas-machine of four-horse power. The light is upon an iron base, which stands upon the floor and can be moved to and fro, and is placed mostly by the side of the screen. A metal reflector upon the frame, in which the carbon light burns, throws the rays upon a nearly flat, paper screen of about two metres diameter, placed in the ceiling about five feet in front of the screen, and lights it very brightly. The light is not disagreeable and does not disturb the sitter in the least. The time of exposure at a trial at which I was present was ten seconds upon sensitive dry plates (which corresponds with about thirty to forty seconds for wet plates). Even a group of a width of about five feet could be illuminated pretty easily with the light. The light burning upon the iron base annoyed the operator very much, and it was necessary to guard it so as not to disturb the objective. The pictures made with this light are not inferior in any way to those made with daylight. The expenses for the machine and fixtures were nine thousand reichsmark—equal to two thousand one hundred and sixty dollars—and the running expenses thirty-eight cents per hour. It is not improbable that this first enterprise will be imitated soon, although the patronage of the public is as yet only very moderate. The strength of light at the disposal of Mr. Ranzelen is not any too great—my friend Leaitzry, in St. Petersburg, using a light in his studio which enables him to get through in four seconds.

It is the general practice with gelatin plates and my emulsion plates to use alkaline development or, better said, chemical development. The employment of the common acid developer (as, for instance, citric solution of silver and pyrogallus) as used formerly with dry plates, was not practicable for gelatin plates, in so far as it caused considerable veil through the secondary influence of the silver upon the gelatin. This defect does not appear in my emulsion plates; they admit of the use of the acid pyro-developer without danger of veil; veil might only be formed after a very long period of treatment with that developer.

I tried the acid developer with my emulsion plates, which were at least fifteen times more sensitive than wet ones, and was somewhat astonished to find after an exposure, which, with alkaline development, produces a perfectly distinct picture, no trace whatever of one. I doubled and tripled the time of exposure, and at last exposed ten times as long, without being able to obtain a result with said acid developer, and only after an exposure of fifteen times the usual length of time, the acid development produced a faint picture, which proves that with acid development the highly sensitive emulsion plates do not show a one-fifteenth degree of the sensitiveness produced with alkaline development; they even appeared to be one-fifth less sensitive than wet plates, and therefore are certainly inferior to the best collodion emulsion plates (made with excess of silver). It may, therefore, be inferred that the great sensitiveness of the more recent emulsion plates is caused less by the stronger modifications they undergo in the light, than by the relatively greater power of reduction of the lighted parts through the alkaline developer, and by the resistance the wet lighted parts offer to the process of reduction. Speaking of my emulsion, I may here just as well permit myself to point out a little incorrectness in the statement of our highly esteemed colleague, Mr. Vidal, in your January issue, in so far as he thinks the price of six francs for one hundred grains of my emulsion very high; but he forgets to take into consideration, that with this quantity twenty-five 7 x 5 inch plates can be coated, which brings the price of the coating of such a plate only to five or six cents, which is cheaper than the cheapest gelatin plates in the market. The complaint has been made, not without reason, that said emulsion comes only in small quantities in the market. On manufacturing the emulsion wholesale, it became of paramount importance to use the utmost care in selecting the raw materials, as gelatin, radical vinegar (spirit of verdigris), collodion, etc., must be of a certain quality only, and it took my manufacturer, Dr. Byth, here in Berlin, a long while to find the right source for those substances; some substances in the market are of such unstable quality, that he was obliged to manufacture them himself. Under these circumstances we were of course restricted in manufacturing by the limited supply of pure raw materials, and only now, when we have perfected our system of purifying, respectively by the self-production of the raw material, are we able to put larger quantities in the market. Till now we could supply only Germany and our neighbor France, while America and England were left out in the cold, but in the course of next month my American friends shall be satisfied.

From several quarters I have heard that the india-rubber solution, which has to be used as a preliminary coat upon my plates, is not always obtainable in good quality. Dr. Eder writes that the already known sensitiveness to light of the caoutchouc exerts a very marked injurious influence in those solutions of caoutchouc. Last summer he observed, with Captain Toth, that caoutchouc solutions in bottles not quite full (*i.e.* containing air) become liquid in the light in the course of months, and form in cooperating a layer soluble partly in alcohol and ether. It is obvious that such disintegrated solution is not to be used for the preliminary preparation of Vogel's plates, for the layer which became soluble in alcohol is dissolved by Vogel's emulsion, and thereby the connecting-link between glass and emulsion layer becomes detached in washing. This is the reason of the failure complained about by some practical operators, who found the emulsion layer to get loose in washing, or to crack off in printing. We recommend the keeping of the caoutchouc solution in yellow bottles, in order to prevent this decomposition.

The photographic exposition at Vienna was opened February the twelfth. According to the catalogue, the number of exhibitors is one hundred and four. Portrait and landscape photography is excluded, as you know, so that the exhibition represents more the photographic-mechanical multiplying process and the new methods. Of familiar names I miss Albert, Bruckmann, and Obernetter, of Munich; Braun, of Dornach; Goupil, of Paris; Royal Staatsdruckerei, Berlin, etc., and America does not seem to be represented at all.

Who is the original inventor of the black art? Daguerre? No! Talbot? No! Davy? No! Niepce? No! According to Dr. Eder, who has just published a very interesting article upon the history of photography, it is a German by the name of J. H. Schulze. Dr. Eder writes: "In the year 1727 the German physician J. H. Schulze (born 1687—died 1744), member of the 'Academia Cæsarea Leopoldino-Carolina,' occupied himself in experiments to produce the 'Phosphorus of Baldwin' (Leuchtstein, or shining stone)." In these experiments nitric acid had to be saturated with chalk. Schulze wanted to try the effect of the addition of silver to the nitric acid used in the experiments; he therefore dissolved some silver in nitric acid, and poured this upon chalk. He happened to make this manipulation by a window through which the sunlight poured in, and to his astonishment he observed that the surface of the part of the chalky sediment upon the bottom, which faced the light, became dark, while the unlighted parts remained unchanged. Schulze followed up these phenomena further, and proved, through undoubted experiments, that this darkening was caused through the influence of the light and not through warmth, and thereby became the discoverer of the sensitiveness to light of the silver salts. He found that the above-mentioned mixture became violet-black (*atrorubentem et in coeruleum vergentem*) in the sunlight, and convinced himself that this effect was owing only to the influence of the light, and not to the warmth, for when he exposed a bottle filled with the mixture to the dark warmth of a stove, it did not change its color in the least. In order to become quite certain that only those parts of the silver containing chalk sediment, which were directly reached by the light, changed color, he fastened a thread on the side of the bottle, and found, in fact, that the parts which were protected from the light by the thread remained white. He also pasted paper stencils, upon which words and sentences were cut out, upon glass, and it did not take long, the parts which were not protected from the light became dark in the light, and the words and sentences were exactly copied in the silver sediment. He showed this experiment to his friends, who were much surprised at the phenomenon. It is further stated in Schulze's report that the silver containing chalky sediment is blackened instantaneously by the sunlight concentrated through the burning-glass, and that also a pure (not chalky) solution of nitrate of silver becomes gradually dark in the light. From these premises it is clear, without gainsay, that Schulze fully understood already, in 1727, not alone the sensitiveness to light of the silver salts, but employed the same also to copy sentences with the sunlight, and it is only justice to acknowledge Schulze, a German, as the inventor of photography, although, till now, he has never as yet been mentioned in this respect. Johann Heinrich Schulze, born in Coblentz, May 12th, 1687, received the degree of Doctor of Medicine, 1717, at Halle; became, 1729, Professor of Medicine and teacher of the Greek and Arabic languages at the University at Altdorf, and later at Halle. In spite of the extremely interesting nature of Schulze's discoveries, it is a fact that they passed without any further notice; they were made a full century too early, for the world was not yet prepared to grasp the import of such a phenomena, and it shared, in this respect at least, a similar fate with the first steam-engine and the first steamboat, which were constructed at a time when nobody knew how to make the right use of them.

Another novelty is a new landscape objective of Voigtlander. It is constructed symmetrically, and recalls the aplanat and the euryscope. The stops vary from 4 to 22 m.m. aperture. I tested the instrument. It has a focus of 316 m.m. and shows a field of view of 90° and a field fit for use of 80°, so that it renders a fourteen-inch plate clear to the margin. It is, therefore, superior in this respect to the common aplanat, but does not come up to the standard of the pantoscope, which gives a clear picture over 90°. The strength of light of the instrument is about one-third of that of the aplanat, and therefore still larger than that of the pantoscope. The instrument looks much like Steinheil's landscape aplanat.

At the meeting of the Photographic Society of Vienna, on the 2d of November last, Dr. Eder spoke about his method to separate the bromide of silver from spoiled gelatin emulsions by boiling with diluted sulphuric acid; in which operation neither a disagreeable odor is noticed, nor is the separated bromide of silver polluted by a secondary production, it settling, on the contrary, as a compact precipitate on the bottom of the vessel, under a clear liquid.

The same showed negatives, made in conjunction with Captain Pizzighelli, by exposing the layer of bromide of silver gelatin from three to five minutes to ammonia vapors. The negatives show much more details, as compared with those obtained with the same bromide of silver emulsion, and equally long-exposed negatives.

Thus the number of expedients to increase the sensitiveness of the gelatin emulsions has found another addition. The most curious part, however, is the fact that the gelatin emulsions become more durable the longer they are kept. Asbury published very interesting observations on this subject, according to which the sensitiveness of the emulsion often doubles itself in one day, while in two days later it is three times more sensitive than on the first day. Some emulsions show already on the third day the triple sensitiveness. The assertion was made that the increase of the sensitiveness was due to the repeated warming of the emulsion in order to dissolve the same; but this opinion cannot be maintained; for several samples of emulsion were kept undissolved different lengths of time, and then dissolved, when they showed the same sensitiveness as if they had been warmed day by day.

What is now the cause of this phenomenon? Abney says he does not know yet, and I, too, must confess that it is a mystery to me. Very truly yours,

Dr. H. Vogel.

Berlin, February 28th, 1881.

FRENCH CORRESPONDENCE.

Process for Quickly Removing the Ink of the Chromograph, coming either from a Photographic or Autographic Transfer—Banquet of the Syndical Chamber of Photography—Reduction Process with Perchloride of Iron for Negatives that are too Intense—Report of Mr. Davanne, in the name of the Jury, on the Universal Exhibition of 1878—*Condition of the Photographic Art in France—Emulsion—Curious Effect of a Saturated Solution of Hyposulphite of Soda in Water upon a Gelatino-Bromide Plate—Phosphorescent Emulsion—Strengthening of Gelatino-Bromide Negatives with Iron Oxalate—Method of Preserving the Oxalate Bath until the Liquid is Entirely used—Progress in Positive Prints on Extra Sensitized Paper and by Development—Paper Prepared by the Abney Process—Portable Apparatus—Photographic Jumelle Instantaneous Stop of Messrs. Collin & Stebbing—Auto-Photography on Parchment-Paper—Lecture of Mr. Davanne at the Sorbonne—Heliographic Process of Major Waterhouse—Manual for the Photographer by Mr. C. Fabre for* 1881—*French Photographic Society, February Meeting.*

Several different applications of the chromograph have already been made, and notably for reproducing photographic prints, without speaking of the use made of it everywhere for multiplying writings. Many persons are discouraged by the difficulties encountered in removing the last traces of the coloring matter even after reiterated washings. Here is the best method to adopt: As soon as the printing is finished it suffices to throw tepid water rapidly on the sheet of gelatin, as is done in developing a print with sulphate of iron. The slightly heated water removes a very thin film from the gelatin, and the chromograph may at once be used for new operations.

Water containing chlorohydric acid would also produce the desired effect, but it would be necessary, in this case, to cover the zinc box containing the gelatin with a preservative varnish, otherwise the acid would attack it.

We only mention the banquet of the Syndical Chamber of Photography, which took place on the 17th of January, for the purpose of publishing the interesting fact, for all, of the toast offered by our president to all the French members or foreign correspondents of the Syndicate of Photography.

We deemed it our duty to complete the idea of the Hon. Mr. Truchelut by drinking to the foreign photographic press, whose assistance and sympathies are dear to us. As far as we are concerned, it may count upon the most thorough reciprocity. This banquet, which was of a most cordial character, has rendered still stronger the unity which exists among all the members of the photographic corporation.

The following process, presented by Mr. O'Madden to the French Photographic Society, for reducing negatives that are too intense, appears worthy of mention. The negative is placed, after having been fixed, in a bath of perchloride of iron at three per cent., and is allowed to remain there until it has acquired the desired degree of intensity, after which it is washed. Chloride of silver is formed, and the action is such that, when the immersion in the bath is sufficiently prolonged, the negative image disappears almost entirely. It may be reproduced, as has been shown by Mr. A. Chardon, by plunging it into oxalate of iron.

A negative was treated in this manner, and was recovered seven times without losing value after having disappeared seven times in the perchloride of iron. It is possible to obtain by this means better details in the shadows.

The Minister of Commerce and Agriculture has just published the report of Mr. Davanne, made in the name of the jury of class No. 12 (photographic prints and appliances), on the Universal Exhibition of 1878. This is a very important document, constituting a point of departure for the appreciation of the progress which has been made since 1878, when later a new statement will be made of photographic art and science.

Each specialty is necessarily treated in a very condensed form, but everywhere sufficiently explicit and clear to offer the value of a precise definition. It is possible that some opinions may differ from those set forth by Mr. Davanne, but he has treated all subjects with so much moderation and impartiality, that it seems doubtful that the most exacting can find any fault with this remarkable report.

Photography, during the past year, has not shown as much activity here as in England, Germany, in Belgium, even, and in the United States of America, where the Association of American Photographers brought together so many members at the Chicago Convention.

Not that there is nothing to carry to our credit for 1880. Our photographic world is too progressive; we have among us men of too great worth, and of too ardent devotion to the photographic art, to fear that we shall at any time remain in a dormant state. Our progress, however, during the past year has been rather indirect. We have taken up the discoveries of others, and our efforts have borne more especially on the organization of the photographic corporation, as proves the creation of our French syndicate, and finally, on the popularizing of our special science. The lectures of Mr. Davanne, at the Sorbonne, are an example of this. The investigations of detail have been carefully made in order to verify facts found elsewhere, such, for example, as the numerous experiments and the wide-spread applications pertaining to the gelatino-bromide process.

The emulsion of our eminent colleague, Dr. Vogel, has hardly become acclimatized with us. We hope it will meet with success, and it doubtless will at least serve to bring forth analogous processes by means of which photographers may easily prepare their own dry plates.

The summary of what has been done in 1880 is, therefore, very easily stated, and we hope that the new year, into which we will not enter without addressing to all our kind readers of the *Philadelphia Photographer* our warmest wishes for their success and happiness, that this year 1881 will bring forth discoveries more worthy of being placed on record.

We certainly do not envy those countries more favored than us, those that have the good fortune to possess men like Eder, Monckhoven, Vogel, Abney, etc. Science has no boundary; wherever our colleagues shine by their investigations and their discoveries, whatever may be their nationality, they honor our art, and we honor them. However, as far as we are concerned, we must deny that in our sphere of activity are produced any important works calculated to cause the progress that we all desire in the more complete accomplishment of the destinies of photography.

It is but just to admit that the further we advance the more difficult it will be to make new improvements in an art which has already gone ahead with so much celerity. It is certain that progress is yet to be sought for, and especially in utilizing photography in a more commercial and practical manner. From this standpoint, we are still in the infancy of the art. Phototypic impressions and photo-engraving, with half-tones, although they can be made with very great perfection, are not yet in common use. The number of houses producing these prints is very limited, especially in France, where phototypy is only successfully worked by two or three houses. As to photo-engraving with half-tones, that process is almost entirely confined to the establishments of Messrs. Goupil and Dujardin. On the other hand, the phototypographic engraving of line drawings is practised on a large scale. Besides the establishments of Mr. Gillot and Messrs. Yves & Barret, there are many others—Messrs. Fernique, Michlet, etc.

We should be able to obtain prints of modelled subjects with the same facility with which we obtain line subjects. The efforts of Messrs. C. Petit, Pinel, Heritier, Michaud, etc., in this direction, have not yet led to results that are absolutely satisfying; but this important subject meets with much attention, and we have no doubt that shortly we shall have a more definite solution of this difficult but interesting problem. The commercial future of photography depends on this, as then it will belong fully to the art of printing, realizing all the services anticipated from the splendid discoveries of Alphonse Poitevin.

We have pointed out the line of investigation to which scientists in our art should especially devote themselves. Let us hope that this time next year we shall be enabled to state that further progress has been made in this line.

The idea of our colleague, Mr. Henderson, of London, of putting in the gelatin emulsion phosphorescent sulphuret of calcium, did not impress us favorably. We have, however, tried it, and without being able to retain in suspension in the emulsion a powder of so great a density. As a general rule, it is, in our opinion, a false track to follow, that which consists in mixing a solid and dense substance with a liquid in which it is to form a homogeneous emulsion. Many other reasons besides lead us to suppose that very satisfactory results will not be reached with this particular substance. We hope that we may be mistaken, as our sincere wish is the success of the experiments of our colleagues, and the progress of our art.

Now for something more serious. It is but a simple fact, but it has been made known to us at this very moment, by our friend Monckhoven, and we give it in all its freshness to the *Philadelphia Photographer.*

Solutions, at different degrees, of hyposulphite of soda in water 10 per cent., 15 per cent., 20 per cent., and 30 per cent., and at saturation, used for fixing gelatin plates, act differently; but, contrary to all expectation, when above twenty per cent. the solution loses its fixing properties to so great a degree that a saturated solution no longer fixes, even after several hours. A solution at twenty per cent. is the most rapid. We have not verified this curious fact, and we put it here as given to us by Monckhoven. However, the verification is very easy, and it is certainly a very unexpected result.

All questions bearing on the use of gelatin emulsions offer to-day so much interest, that too much attention cannot be paid to everything that pertains to this process, now so much in favor in all parts of the world. The *Philadelphia Photographer*, following the current, has published a February number that is most truly complete in this special point of view, and so filled with facts, formulæ, and *dodges*, relating to gelatino-bromide, that it seems to have exhausted the subject, at least as far as general principles are concerned. We are, therefore, reduced to gleaning the few improvements which go from time to time to render more perfect this new mode.

One of our French colleagues, Mr. Desvignes, has remarked that it is possible to strengthen a gelatin negative by replunging it in the iron-oxalate bath in which it had been developed. This strengthening may be done in full light, and of course after fixing. To preserve for a long time use the solution recommended by Mr. Eder, viz.:

Distilled Water, . .	1000 grm. (32 oz. Troy).
Pure Sulphate of Iron (dissolved without heat), . . .	300 " (9 oz. Troy, 5 dr.)
Sulphuric Acid, . .	3 drops.

(Mixture to be filtered.)

Mr. Desvignes recommends, for a quart of the bath, to use three ounces of iron-wire as fine as possible, cut into pieces of the same length as the vessel containing the iron bath. When the solution is exhausted, more is poured on the same wire, and the solution may be used to the last drop, whilst without this precaution it could not be kept for more than from eight to ten days.

You have heard in America of the efforts made in France, by Messrs. Christian and Liebert, and in England by Morgan & Co., to introduce sensitized paper giving prints by development. The idea of utilizing paper covered with a highly sensitized film, to give by development positive prints, is certainly not novel, but it has never enjoyed as much favor as at the present writing. This arises from the fact that there are important industrial undertakings based on this method, and that there now exists important interests depending on the success of the process, and consequently on its greatest possible development. We doubt, however, that, outside of certain applications, among us much use will be made of this process, especially for printing portraits. Preference will always be given to the albumen paper, which gives images of a more satisfactory effect. However, the possibility of arriving at a very rapid production will allow this process to render great services. It adapts itself marvellously to the enlargement of photographs and to those numerous industrial works which do not require a serious artistic value. Numerous photographers have already tried this process, with which they are satisfied, but they do not intend to use it in all circumstances to the exclusion of others. It would be a cause of much regret, if any process, however complete it might be, were made a universal panacea. The more we advance in the path of progress and of variety in photographic processes, more selection becomes necessary and advantageous, because it is possible to apply to each kind of work the method of reproduction best adapted to it.

Without penetrating more than is proper into the secrets of the preparations of Messrs. Morgan and associates, let us refer here to the process on gelatin-paper indicated by Captain Abney. It gives an idea of the formulæ that may be composed for making sensitized emulsions suitable for positive paper by development. Take gelatin-paper, such as is prepared for photo-lithography. Float it on an iodized bath until the iodine colors the back of the sheet. The excess of liquid is removed by sliding the paper on a glass rod as it comes from the dish. When it is dry, or almost so, it is floated upon the sensitizing bath until the color due to the iodine bath disappears. Now wash with care, and develop, after exposure, in a solution saturated whilst warm of oxalate of iron in neutral oxalate of potash. When cold, this solution is energetically agitated, then allowed to repose and finally decanted; a little of the solution of the neutral oxalate of potash is now added. The developer is composed of a mixture of one volume of this solution, to which is added an equal volume of a solution of 1.30 grammes (20 grains) of bromide of potassium in 30 c. c. (7 drachms, 42½ grains) of water. An equal quantity of water is added. The paper is passed through water, then immersed in a suitable quantity of the developer. The development is rapidly produced in from five to six minutes.

This process shows that preference should be given to an iodized or bromo-iodized emulsion, as, if ordinary bromized gelatin was used, we would have grayish-black prints of an unsatisfactory tone. Toning, however, is necessary, and the best has not yet been decided upon, but a gold-lime bath gives a full series of divers tones. If the iodine predominates in the emulsion, we get black prints. If the bromide is in excess, the result is of a bistre color. We may, therefore, stop at the binary composition of the silver salt, which will give, according to taste and the nature of the work, the most suitable color.

The gold-lime bath alluded to above may be composed as follows:

Chloride of Gold, .	1 grm.	(15½ grs.)
Water, . . .	1000 "	(32 Troy ozs.)
Chalk to neutralize,		
Citric Acid, . .	a few drops.	

It is evident that formulæ suitable for the preparation of these rapid positive papers may be varied without limit, and the general ideas that we give on this subject have no other object than to serve as a guide for investigation, and to facilitate the first experiments in this truly interesting line, which to-day forms the indispensable corollary of the negatives obtained with so much rapidity.

This last remark brings us to the question of very portable photographic appliances. As far back as twelve or fifteen years, one of my colleagues, the well-known Mr. Geymet, had constructed a photographic Jumelle (in the form of an opera-glass) having a circular changing box, containing fifty small sensitized plates. We doubt if this instrument, although ingeniously conceived, has proved very useful. It came before its time, as when it made its appearance dry processes were not rapid, and it was, therefore, almost impossible to utilize an apparatus of this kind which implies instantaneousness.

Mr. Germeuil Bonnaud, taking up this idea, has adapted it to new processes. It is now possible with a small camera, like that formed by one branch of an opera-glass, to obtain at all times prints sufficiently rapid to deserve (relatively, however) to be called instantaneous.

The idea of using such a glass is very ingenious, as the object to be reproduced is seen with one eye, whilst on the other side of the glass operates a catch, which, by a simple touch of the finger, acts on the stop at the precise moment when the object to be taken is in the most suitable position.

Thanks to gelatino-bromide, it is now possible to make use, with great precision, of a little apparatus of this description, essentially portable, and so arranged that it can be used by every one, even by those who know nothing about photography. The result, it is true, will never be other than a very small view of a few square centimeters, but there will be sufficient to recall to the mind the impression received when returned from a promenade, an excursion, or a voyage.

It will be possible to enlarge these small prints to any desired size. By means of positive papers, by development, and an enlarging lens placed before a small apparatus lighted by a petroleum lamp, any one can obtain directly immediate positive enlargements. All this may prove very simple and convenient, as it is possible to obtain, already prepared, extra sensitized paper as well as the small plates or pellicles suitable for using in the glass. After reflection, it will be found that we are in the right path —the practical path—the one that should always be sought for. To resume, a photographic glass of this kind and a stock of sensitized pellicles would enable excursionists to make all kinds of reproductions, and when home, by means of the enlarging lamposcope of Mr. Molteni for example, to make quickly, without any other agency, and without making a small positive, a positive print of any size that may be desired.

There is no doubt that this is a new departure, and there is money to be made by any one who will take up the thing intelligently.

Instantaneous stops are not wanting, and every day new ones are produced, which proves there is a great desire for rapidity and instantaneousness. Now we have Mr. Stebbing, who in company with Mr. Collin, the manufacturer, has produced a new and very ingenious system. To begin with, this apparatus is furnished with a graduation which increases or diminishes the rapidity, a thing which we had so often and so strenuously asked for. Moreover, it opens and shuts in such a way that, for an exposure of half a second, for example, it stops for about that duration of time, without acting continuously, as is the case in all other stops of this kind.

A bed of air upon which rests a piston is what produces this stoppage. The air escapes more or less quickly, and, as soon as it ceases to hold back the piston, ascuration is produced.

This is very ingenious, and we indulge in the hope that this system may be used in the objective in the very place where the diaphragm is situated. The model that we saw is of the most elegant construction.

A very intelligent manufacturer, Otto Lelm, is now selling in Paris a reproduction process known by the name of the "Black Auto-Copyist," and which, in our opinion, is much superior to the chromograph, the composition of which is so easily spoiled.

This process consists in printing with printers' ink upon parchment-paper covered with gelatin and stretched on a frame. An ink having a perchloride of iron base is used to write on ordinary paper, then, when the writing is dry, it is transferred to the gelatin, which has been previously moistened, and then the inking-roller is used.

The salt of iron coagulates the gelatin, renders it impervious to water and ready to receive the fatty body.

It will be perceived that this system is rapid and ingenious. We have forgotten to mention that there is no necessity for using a press in the printing, as this is done simply with the hand, as with the chromograph.

We mention all this only on account of the application which may be made, and which we have just made to photography, in the following manner: The gelatinized parchment-paper is sensitized with bichromate of potash at two per cent., then is printed on it a line photographic image by means of a rigid or flexible cliché, and then, after exposure, washed in abundant water, and when all the free bichromate has been removed, use the auto-copyist absolutely as if had been transferred to it a drawing or a writing made with an ink with an iron or tannin base. We hope one day to make use of this process for printing in half-tones, as the idea of the parchment-paper is an excellent one, inasmuch as, owing to the elasticity of this paper, it is possible to arrive at a perfect tension of the film, whilst using at the same time a support offering very great resistance.

In this case, it would be necessary to prepare the parchment-paper so as to render it suitable for modelled impressions. A thinner coating of gelatin will be necessary, and also to select the quality of the gelatin and the compositions suitable for this kind of printing. The parchment-paper appears to us likely to take the place, with advantage, of all the supports which have been tried up to the present time. Some of these were too difficult to prepare beforehand, and the others were not strong enough. With this support it will be possible to furnish prepared sheets which only require sensitizing at the time of using.

Mr. Davanne brilliantly inaugurated on the 26th of February last his six lectures of the Sorbonne. One of the experiments which excited the most interest, was the development of a positive print thrown on the screen, and which was thus produced to the view of all the numerous spectators. Thanks to this feature of projections, lectures like these become extremely interesting, and they play a great part in popularizing photographic processes.

We have just had the great pleasure of passing some moments with Major Waterhouse, and to see the plates and prints obtained by his paraffine grain. The experiments made by him in this direction are very striking; and prints made by a special house, which has succeeded in successfully working this ingenious process, are fully equal to the splendid helio-engravings of the principal houses which are engaged in this kind of production. The most delicate point of this process is that relating to the fine half-tones. The sand on these portions is retained with difficulty; it becomes detached by the brushing, and a harshness is the result. It appears to be necessary to treat the relief with two kinds of sand of different degrees of fineness—the half-tones by very fine sand, and the other portions by one of a coarser grain; but this requires on the part of the operator a considerable amount of skill.

For making images of uniform tone, or in which the soft half-tones are rare, this process is admirable. There is no doubt that in working this method it will be perfected so as to overcome the difficulties that we point out.

The Manual for 1881 of Mr. C. Fabre, of Toulouse, has just made its appearance. It is our only French photographic annual, is very complete, and forms a very useful *vade-mecum* for all those who have to do with photography. Like most of our other photographic publications, it is edited by Mr. Gauthier Villars.

The last meeting of the Photographic Society took place on the 4th of last February. No very interesting communications were made, except that of Mr. Stebbing relating to positives by development. The experiments made during the meeting interested in the highest degree the members of the Society.

Mr. Chardon, referring to a gelatino-bromide negative which, although varnished, had been blistered in certain portions by contact with a liquid, advises to varnish gelatin negatives with normal collodion. This coating is impervious to water when dry, is not elastic, and offers a good protection for the clichés. The March meeting promises to be more interesting.

LEON VIDAL

PARIS, March 1st, 1881.

SOCIETY GOSSIP.

Chicago Photographic Association.—A regular meeting was held at Douglass, Thompson & Co.'s warehouse, 229 and 231 State Street, on Wednesday evening, March 2d, 1881, Mr. A. Hall, President, in the chair. Meeting called to order at 8 o'clock. Minutes of last meeting having been read and accepted, the President inquired if any one present had a copy of the Constitution and By-laws, but no one seemed able to produce such an article.

Messrs. J. A. Witter, of Chicago, and T. Roeder, Arlington, Ills., were elected members.

The floor was then taken by Professor W. H. Mardock, who delivered a very interesting lecture, as follows.

Mr. Chairman and Gentlemen: I anticipated the pleasure of calling your attention, to-night, to the manufacture and methods of testing the various iodides and bromides, as announced at our last meeting; but on account of illness, and consequent extra work on recovery, I have not been able to devote the time requisite for the preparation of the various solutions. By your kind permission, I will take up the second subject mentioned, viz.: "An accurate and easy method of testing the amount of nitrate of silver present in any solution."

I will introduce the subject by giving you a description of the various processes through which this important metal passes, from the ore until it reaches you as nitrate of silver in the crystalline form. I have here before me samples of various ores of silver in combination with other metals, such as lead, copper, antimony, arsenic, etc., forming the principal source of our present supply of silver. Before entering on the subject of extraction and refining on the large scale, I will give you a brief description of the method we adopt for determining the exact amount of gold or silver present in the ore—commonly known as "assaying." A specimen of ore is brought to us, supposed to represent an average of the mine from which it has been extracted, and we are required to determine the amount and value of the precious metals present to the ton of ore, possibly also the lead or copper. I shall refer to the gold and silver only. Our specimen is first brought to a fine state of division by suitable means, and is then passed through a fine sieve of from sixty to eighty meshes to the inch, and is carefully mixed. Should sulphur be present in excess, such as in iron and copper pyrites, it will be necessary to roast carefully to expel that ingredient (after having weighed out carefully such portion of the ore as we desire to use). Ore, like coal, is bought and sold by the ton of 2000 pounds avoirdupois, and, as you are probably aware, the result in gold and silver is sold by troy weight, of 480 grains per ounce; so we are compelled to convert avoirdupois weight into troy, for convenience in calculating our results, thus: 2000 pounds $\times$ 16 = 32,000 ounces $\times 437\frac{1}{2}$ (the number of grains in an ounce avoirdupois, = 14,000,000 grains, divided by 480 = 29,166 troy ounces, in one ton avoirdupois. Instead of taking 29,166 ounces, we resort to the metric system, taking 29,166 milligrammes of ore, which we denominate our assay ton; each milligramme of gold or silver obtained from this assay ton is to the 29,166 ounces as one ounce troy is to the ton avoirdupois. For the convenience of the assayer, weights are made of the following values, one-ninth, one-tenth, one-third, one-half, and one assay ton.

Having weighed our ore, we have next to flux it, to render the mass of metal, silica, alumina, etc., soluble by the aid of heat. This flux consists principally of litharge (PbO), argols, bicarbonate soda, nitrate potash, wheat flour, and is varied according to the nature of the ore. The litharge forms not only a fine reducing agent, but also, by giving up its oxygen, is converted into the metallic state, thus forming a wash to carry down and collect into one button all the precious metals. The ore, litharge, flux, etc., are intimately mixed and placed in a crucible; a covering of borax is added, and finally one of salt (chloride of sodium UaCl). The crucible is gradually warmed, and placed in the furnace and fused until perfectly fluid; it is now taken from the furnace and poured into an iron mould previously warmed, where it is allowed to cool; when cold, the slag is detached, and the button of base bullion so obtained is hammered into cube shape, and is now ready for "cupellation."

The article I now show you is a cupel, and is formed from bone-ash (preferably from the bones of the horse and sheep), dampened with water and firmly compressed in a mould. When carefully dried, it not only stands an intense heat, but absorbs double its weight of the oxides formed from the base metals. The fire-clay muffle—such as I now show you—is next placed in the furnace and surrounded with a good fire. In this muffle the cupel is placed and heated to redness. On the cupel the button of bullion is placed, where it melts, and, by the action of the air and heat, the base metals are oxidized off, leaving a bead of silver or gold, or both, on the cupel. This bead is weighed in an assay balance capable of registering the twentieth part of a milligramme, such delicacy being absolutely necessary from the fact that we are sometimes compelled to weigh beads scarcely larger than the point of a pin. After weighing the bead, we proceed to separate the gold and silver by dissolving the silver in nitric acid, leaving the gold in a finely-divided state in the bottom of the test-tube. You will observe, however, that should gold predominate in the bead, the nitric acid will fail to dissolve the silver, and we have to resort to "inquartation," in other words, the addition of two-and-a-half parts of silver to each part of gold. This is done by the aid of the blow-pipe. The acid will then do its work. When dissolved, the nitrate solution is poured off, the gold washed, collected, and weighed, and its weight deducted from the weight of gold and silver first obtained. For example, we take 29,166 milligrammes of ore (one assay ton), and the bead of gold and silver obtained weighs 20 milligrammes; we have 20 ounces to the ton. Next, in dissolving the silver, we find 5 milligrammes of gold. Our certificate would read

Silver, 15 ounces @ $1.29 (U. S. standard value), . . .	$19 35
Gold, 5 ounces @ $20.67, . .	103 35
	$122 70

In order to make this commercial silver sufficiently pure for the manufacture of nitrate, it has to be dissolved in acid and precipitated as a chloride, preferably. Besides smelting, there is another method of reducing gold and silver ores, viz.: amalgamation with mercury, which possesses the property of dissolving out the precious metals, if free—the ore being, of course, reduced to a fine pulp. But if sulphides are present, the ore is "greasy," and must be first roasted. The ore and mercury are ground together in a pan, the sandy matter (being lighter) is washed away, and the amalgamated silver squeezed in a chamois skin, or its equivalent, to remove most of the mercury, which passes through, leaving silver and a little mercury behind. Besides these two processes there is lixiviation for certain classes of ores not suited for smelting. Here is a sample of such ore from Georgia, which yields by lixiviation $450 per ton, but by amalgamation cannot be made to yield more than $4.50; the reason being that the particles of gold are enveloped in iron which must be broken to get it out.

I have now described the principal methods adopted on a large scale for the reduction and refining of silver, and will proceed to that part of my subject more closely connected with photography.

Silver residues, as received from photographers, usually contain plenty of iron, in the shape of nails and tacks, and also pins, especially in the case of ashes from silvered paper; the tacks being principally those used to tack on the vignette-paper to the printing-frame; or I have occasionally found a pair of old rubber shoes. All this is the result of carelessness on the part of the photographer, and causes the refiner a good deal of unnecessary trouble. The method of working on a large scale is entirely different. Instead of a crucible or scorifier, a reverberatory reducing furnace is used. Instead of bicarbonate of soda, the flux consists of lime or limestone, and charcoal or coke is used as a reducing agent. With Galena ore, iron is also added to take up the sulphur. The base bullion is generally shipped to eastern refineries, and this refining is the most particular part of the process.

The base bullion is melted down, zinc being added to extract the silver from the lead, and the mixed silver and zinc float on top, while the lead sinks to the bottom. The zinc can then be driven off by volatilization.

For cupellation on a large scale, a test furnace with a bone-ash bottom is used, which absorbs part of the litharge formed by oxidation of the lead, while the remainder floats away, leaving nearly pure silver. By this process it is possible to get silver 990 fine, and that is about the limit in melting in a commercial scale.

Having converted these residues into the metallic state, their impurities must be removed. On dissolving the (impure) silver in nitric acid, the liquid will be found to be perfectly green or blue, according as iron or copper is the predominating impurity. In order to refine, we granulate the metallic silver, cut up in nitric acid, and precipitate the pure silver as chloride, the other metals present remaining in solution. In this way we get our silver 999 fine—about as fine as silver can be obtained on a practical scale—and this is what we use in making nitrate of silver. Many photographers imagine that we take the metallic silver just as it comes from melting down their residues, and dissolve in nitric acid for nitrate; but this is a mistake. We cannot even use ordinary commercial silver without first converting it into a chloride. There are only three known metals that can be precipitated as chlorides—silver, mercury, and lead. The lead can be washed out, and the silver may be reconverted to metallic state by electricity; but the best method is by melting in a crucible, adding an equal weight of bicarb. soda and a little borax.

Having now shown you how nitrate of silver is made, I will finish my discourse to-night by describing a correct, simple, inexpensive, and reliable method of testing the strength of solutions of that salt. The usual hydrometer test is only fairly reliable when the solution is new; as it becomes old, it becomes charged with various impurities, more especially albumen in case of a printing bath; and these impurities will register on the hydrometer the same as silver. Moreover, many photographers add some other salt besides silver to their solution for silvering paper—nitrate of ammonia being the most common. Now, this nitrate of ammonia is not taken up by the paper (except so much as mechanically adheres to it), and consequently may contain nearly its original percentage of the ammonia salt when the silver is almost exhausted. And, incidentally, I may remark that I do not believe these additions to a plain silver solution are of any benefit.

In testing such a solution, therefore, the photographer is deceived by the hydrometer readings, which may indicate fifty grains when there is actually not more than ten grains of silver present. It is an injustice to the refiner to send such a solution for reduction, for the sender is disappointed in his returns, curses the refiner, calling him a thief, etc. In doing away with the time-honored hydrometer as a means of testing strength of silver solutions, we abolish all these troubles. The method I propose to substitute for it, and will now describe, was introduced by Gay Lussac, and is now used in the French and English mints, also in India, as a test of the purity of coin, or, in other words, of ascertaining the actual weight of pure silver in a given coin. It was found that by the old method of fusion with lead part of the silver was volatilized, and a committee was appointed by the French mint to devise some more reliable test. Gay Lussac, chairman of that committee, invented the method of precipitation from solution as chloride—chloride of sodium (common salt) being generally used as the precipitating agent, because it is at once the best and cheapest. 58.5 parts, by weight, of anhydrous chloride of sodium will exactly precipitate 108 parts, by weight, of metallic silver; and as nitrate of silver ($AgNO_3$) contains 108 parts of silver in 170 parts, it follows that 58½ grains of sodium chloride will just precipitate silver in 170 grains of nitrate.

Proceed as follows: Dissolve 58½ grains of common salt, thoroughly dried by heat, in 170 c.c. (or drachms, or any convenient unit) of water, and "standardize" the resulting solution thus: Every c.c. of the salt solution ought to just precipitate 1 grain of silver nitrate, but to make sure that it does so, make a silver solution of a definite strength, say 40 grains to the ounce, and measure out such quantity of it as will contain 10 grains silver nitrate; divide this into two equal parts, and to one of these parts add very carefully a measured quantity of the salt solution; it will immediately turn milky. When you have added pretty nearly the 5 c.c. which should be necessary, let the mixture settle. It will help to clear it if you shake it vigorously. This aggregates the particles of chloride, and enables them to settle to the bottom sooner.

When the supernatant liquid has become clear, add very carefully a little more salt solution as long as any milkiness is produced; stop as soon as no further cloudiness is produced. If now you have used just 5 c.c. (or drachms, or whatever your unit was) of the salt solution, all right; proceed to repeat the operation with the other half of the silver solution, and if 10 c.c. exactly has been used, your salt solution is all right; if more or less, you must either add more salt or more water, as the case may be; or take note of the exact quantity used, and do your testing on that basis.

Having "standardized" your salt thus, you can make up as much as you want, and, if tightly corked, it will keep indefinitely. I have here a solution of silver nitrate supposed to contain 40 grains to the ounce. Let us test it. Measure out 1 ounce of it and 40 c.c. salt solution. At first, I add the greater part of the latter at once, because in this case I know nearly the strength of the silver, otherwise must proceed carefully from the commencement. Now we have added most of the salt, shake the mixture vigorously and let it stand awhile. Now it is clear at the top, add a little more salt; still a precipitate, a very little more; cloudy yet, just a trace more; remains clear.

We have used exactly 40 c.c. salt solution, therefore our silver solution contains 40 grains to the ounce, as we supposed.

Let me impress upon you here the necessity of having your measures, bottles, etc., clean, or the results may be vitiated. And in regard to the solution of silver for "standardizing" the salt, you must, of course, use a pure sample of nitrate. Warming the solution helps to precipitate the chloride of silver more rapidly, and thus saves time. In the mints, where they have plenty of this work to do, they put a number of bottles containing different samples of silver into a piece of apparatus resembling a table-castor, and the operator shakes them all up at once with a foot-lever.

This graduate, which I use to measure out the salt solution, is marked on one side in cubic centimetres, on the other in drachms—a very convenient arrangement. The whole apparatus needed for this method of testing need not cost over one dollar; the operation is almost as simple as using the hydrometer. The chloride of sodium and nitrate of silver react on each other, producing chloride of silver and nitrate soda, the latter remaining in solution.

MR. GREENE.—As I understand, the proportions given refer to some number of grains of silver in solution. What effect will any impurities that may be in the bath have on the result?

MR. MARDOCK.—None; they will not precipitate; whereas they redden in the hydrometer the same as silver.

MR. GREENE.—Will not albuminate of silver discolor your printing bath?

MR. MARDOCK.—Yes; but there may be albumen present without discoloring.

THE PRESIDENT.—Will it be albuminate silver or albumen mechanically suspended?

MR. MARDOCK.—Both may be present unless silver solution is very strong. The discoloration will not affect the reactions of the test.

MR. MARYATT.—Then our method is to dissolve 58½ grains salt in 170 c.c. water; each c.c. will then precipitate 1 grain of nitrate silver?

MR. MARDOCK.—Yes; but recollect that you must first dissolve the salt in a less quantity of water, and afterwards make it up to 170 c.c.

A member wanted to know if it was not sufficient to thoroughly dry the salt, without "standardizing" the solution as described by Mr. Mardock. Mr. Mardock thought that what was worth doing at all was worth doing well, and samples of salt might vary a little even when thoroughly dry. In his own practice he read to $\frac{1}{10}$ grain.

Mr. Gentile moved a vote of thanks to the lecturer, which was carried unanimously.

Mr. G. N. Barnard, one of our oldest photographers, who has been absent in the South for the last eight years, being on a short visit to the city, and present at this meeting, was called on by the Chair to make a few remarks.

He said that after such a long absence it was pleasant to see so many old, familiar faces, but he missed many more. There were many things he would like to say, but would not take up the time of the meeting; he expected to see many of the members individually during his stay in town.

Mr. Douglass.—I wish to state here, what Mr. Barnard's native modesty seems to prevent his saying himself, that he is here to demonstrate the gelatin process in the interest of the Eastman Dry Plate Co., of Rochester, N. Y., and is entirely at the service of the members to give any instruction in development, etc., etc. He expects to call on most of the photographers, but his headquarters will be here, and he can be found or heard of at this address during his stay in the city.

Mr. Barnard showed a few prints—portraits and views—made from negatives on Eastman gelatin plates, remarking, however, that his best specimens had been given away on the road. Nevertheless, some of those exhibited were voted by the members very fine work, and showed what the process is capable of in competent hands.

The President wanted to know if any one would volunteer to furnish a paper or other contribution for the next meeting. No one seemed prepared to make any promise to that end.

On motion, adjourned.

F. H. Davies,
Secretary.

Photographic Society of Philadelphia.—The stated meeting of the Society was held at their room, No. 520 Walnut Street, on March 3d, 1881, the President, Mr. Joseph W. Bates, in the chair.

A letter from the Secretary was read, stating that, owing to sickness, he would be unable to attend the meeting. Mr. Samuel Sartain was appointed Secretary, *pro. tem.*

The minutes of last meeting were read and approved.

Mr. Barrington, chairman of the Committee on Excursions, reported the progress made in selecting routes for a proposed trip by canal; but not having obtained all the information necessary, he would not be able to present a complete report until the next meeting.

The amendment to the Constitution, Article 3d, proposed at the last meeting, relative to honorary members, was then taken up for consideration and adopted. The other amendment proposed at the last meeting, providing for the holding of but one stated meeting in each month (instead of two in certain months), was then taken up and, after considerable discussion, adopted by a two-thirds vote. The time of holding the meeting was fixed on the first Wednesday of the month.

Mr. Graff exhibited a fine specimen of portraiture by the phototype process—the work of Mr. F. Gutekunst.

Mr. Bell related some of his experience in making gelatin plates according to the formula given by Mr. Forrest in his article entitled, "Every man his own sensitive-plate maker," published in the *British Journal Almanac* for 1881. He exhibited good prints from the negatives made.

On motion, adjourned.

Samuel Sartain,
Secretary, *pro. tem.*

Boston Photographic Association.—The March meeting of the Association was held, by invitation, in Mr. E. J. Foss's Studio, at Malden, on Wednesday evening, the 9th. Although the weather was very inclement, an unusually large number was present. The subject for discussion was "Foss's Studio." Where has he failed in its construction? (It being built expressly for photography.)

Mr. Foss first showed the visitors into his reception-room, which was tastefully arranged and hung with paintings, crayon heads, etc., of his own and other artists' work.

The meeting was here called to order, and the records of the last meeting read and approved. Some inquiries were made about the convention to be held in New York this summer, and Mr. Foss suggested that the Association be represented by one or more large frames to be filled by members of the

Association, each contributing two or three prints.

A vote of thanks was tendered to the Scovill Manufacturing Company for the *British Journal Almanac*, *Photographic News Year-Book*, and the *Photographic Times*, which the Association have received.

Mr. A. A. Glines, of Newton, was proposed and made a member of the Association.

The visitors were then shown over Mr. Foss's studio from basement to printing-room, spending considerable time in the operating-room, discussing its merits. Mr. Foss then invited them to his house, close by, where they found supper waiting them, to which ample justice was done. The evening was enjoyed by all present, and the rest of the evenings for this season will probably be held at the studios of its members in Boston and surrounding towns.

W. H. PARTRIDGE,
Secretary.

ASSOCIATION OF OPERATIVE PHOTOGRAPHERS OF NEW YORK.—Regular meeting was held at 392 Bowery, New York, March 16th, 1881, President Walker presiding.

After reading and approving of minutes of former meeting, and the order of business carried out, the election of officers for the ensuing year took place, with the following results:

President.—Z. Thomas Walker.

Vice-President.—J. F. Coonley.

Secretary.—Charles Ehrman.

Treasurer.—Victor Acker.

Trustees.—Otto Buehler, John J. Street, and George F. O'Conners.

THE CHICAGO COLLEGE OF PHOTOGRAPHY.

THE old fable of "The hare and the tortoise" has been illustrated of late by the Chicago photo-fraternity. While the National Photographic Association and the Photographers' Association of America have been sleepily discussing the subject of a College of Photography, the sprightly "hares" at Chicago have gone by and will soon have really in working operation a full-fledged and splendidly-accoutred College of Photography.

The annual announcement for the session of 1881 is before us, and, in order to help spread the good news and to aid the gentlemen at the head in their splendid enterprise, we reprint below about the whole of it.

We consider this one of the most important moves that has been made in our art for a long time, and we wish it abundant success. Our only surprise is that the far-seeing projectors have not also undertaken a class in "Art Principles Applicable to Photography," and included among their text-books Mr. H. P. Robinson's admirable *Pictorial Effect in Photography*. But they will do this yet—they must. The young photographer needs such principles pounded into him *first of all*. Once full of them, he will make all the better photographer in every other respect.

ANNOUNCEMENT OF THE CHICAGO COLLEGE OF PHOTOGRAPHY.

The advancement of the science and art of photography has been so rapid of late, that but few engaged in it have been able, by their thorough knowledge of the sciences involved in its manifold processes, to remain in the front rank; but, in this case, as in other professions and vocations, those in the front reap most of the substantial honors and profits.

Photography is, therefore, no longer a simple art to be learned or "picked up" by a few weeks' observation, and afterwards pursued successfully in an empirical manner. Involving the constant use of a great variety of complex chemical compounds under continually changing conditions, and dependent on the occult agency of the undulatory forces, it is evident that familiarity with the sciences of chemistry and optics is an absolute *sine qua non* of success. On the other hand, a knowledge of the principles of fine art is no less essential in the matters of grouping, posing, lighting, retouching, printing, finishing, and mounting. In view of these considerations, it will be the aim of the Chicago College of Photography to impart to its pupils a thorough and systematic knowledge of each of the arts and sciences involved in all the various operations and applications of photography.

Practical Photography.—This department will be taught by Professor Charles Gentile, a gentleman well known in Europe and America as an eminent photographic artist. Instruction will be imparted both by lectures and by practical operations, in which the students, under the guidance of the professor, will be made familiar with all the manipulations, arrangements, and processes necessary in the execution of the finest work of every description. The history of photography, including illustrations of its several stages of advancement, will first claim attention; after which the processes now esteemed most valuable, as the gelatino-bromide dry-plate process, the ordinary collodion wet and dry plate processes, the carbon and platinum processes, etc., will receive careful and minute consideration. The principles governing the subjects of grouping, posing, lighting, etc., will be explained and practically illustrated.

Optics and Chemistry.—This department will be taught by Professor H. D. Garrison, M.D., a gentleman of large experience as a teacher and practical chemist. Understanding photography, and sometimes employing it in his scientific researches, Professor Garrison will be able to present to the students of the college information exactly suited to their wants, without burdening them with a mass of facts irrelevant to their profession. Instruction will be imparted chiefly by lectures, which will begin by a consideration of the undulatory forces, especially heat and light; after which, optical instruments, especially those involved in photographic operations, will receive careful attention. The course in chemistry will include a general knowledge of the elements and the principles and laws governing their behavior. Special attention, however, will be given to those elements involved in photographic processes, and as far as possible these will be used to illustrate the theories and laws of chemistry. Special and complete instruction will be given in such analytic operations as are necessary in testing the strength and purity of the various baths in use as well as of the multitude of chemicals necessarily employed. When it is remembered how essential to success is the absolute purity of certain chemicals, the advantage of such information is obvious.

Retouching, Etc.—This department will be conducted by Professor Barthold Meyer, whose reputation for artistic taste and accuracy in execution has secured him well deserved eminence in this sphere of art. Instruction will be imparted chiefly by practical operations, including retouching, drawing, crayon sketching, finishing, enlarging, copying, coloring, etc. The work of the students will be directed by the professor, who will criticise it and suggest the manner in which it may be improved.

Location.—The college building is located on the corner of Michigan Avenue and Van Buren Street, a situation which, while very central and accessible from all parts of the city by street and steam cars, is remarkably free from the smoke and dust so annoying in many parts. Every facility in the way of lecture and operating-rooms, apparatus, chemicals, etc., will be found in readiness at the opening of the college. Students, upon arrival in the city, should, however, call at once upon the treasurer, Mr. Gayton A. Douglass, 229 and 231 State Street, who will impart all necessary information.

Time and Hours of Instruction.—The course will begin on Wednesday, April 13th, and continue until the end of June. Lectures and practical instruction will be given on Mondays, Wednesdays, and Fridays, commencing at 2 o'clock P.M., and continuing until 4 P.M.

Fees (*payable in advance*).—Matriculation fee, $10.00; Lecture fee, for each Chair, $10.00. Students entering for one department only, will be charged the regular Lecture fee, $10.00, and a Matriculation fee of $5.00. Graduation fee, $10.00; of which half will be returned in case the candidate fails to pass a satisfactory examination.

Qualifications for Graduation.—The candidate must possess a good moral character, must have attended two full courses of lectures in this college, with practice in the intervening time in some reputable photographic studio, or must be a graduate of some school or college in which drawing, optics, and chemistry are taught, and have had one year's experience in a reputable photographic studio, and have attended one course of lectures in this college; or must have had three years' practical experience in general photography, and have attended one course of lectures in this college. *In every case the candidate must be at least eighteen years of age, and must pass a satisfactory examination by the faculty and a committee appointed by the Board of Trustees.*

Text-Books.—"Practical Photography," Vogel and Abney; "Chemistry," Barker and Atfield; "Optics," Van Monckhoven; "Retouching," Burrows and Colton.

Situations.—Most students, who desire to do so, will be able to procure situations in studios in this city, whereby they will not only learn many practical details, but will earn small wages.

Board.—Board, including lodging, fuel, and light, can be obtained at from $3.50 to $6.00 per week, according to location and accommodation.

Tickets.—All tickets must be obtained from the Treasurer, Mr. Gayton A. Douglass, Nos. 229 and 231 State Street, who will cheerfully impart information in regard to board, text-books, etc., and who will keep a register of those desiring situations and those establishments wanting help.

Who are Admissible.—The college is open on equal terms to both ladies and gentlemen of good moral character.

A Word to the Fraternity.—The founders of the Chicago College of Photography, the only institution in this country, and the second in the world, look to you for a generous recognition and support. The faculty will aim to maintain a high standard of education, and to inspire its pupils with that *esprit du corps* so necessary to harmony and fraternity. Viewing photography as involving a knowledge of several difficult branches of science and art, the college will avail itself of every reasonable opportunity to educate the fraternity and the public up to the recognition of the reasonableness and necessity of charging good prices for good work. Visitors from the city or country will always be welcome, and are invited to inspect its halls and hear the lectures. As the trustees desire to found a *Library and Museum of Photography*, books and instruments, new or antique, curious and interesting specimens of the art, etc., are solicited, and will be carefully preserved, displayed, and credited.

The Chicago College of Photography is not identified with, or specially interested in, the success of any department of photographic manufacture or trade, but at the same time *is in full sympathy with all who are honestly and legitimately striving to aid and advance the profession.*

The degree issued by the college will be designated Graduate in Photography, (G. P.,) and will be attested by the presentation of an appropriately devised diploma, which will not under any circumstances be awarded to any who have not fully complied with the requisites for graduation specified in this announcement.

We shall watch the progress of our college with a great deal of interest, and from time to time report its progress.

The list of officers is given in the advertisement of the college further on. Photographers, send your sons and daughters to this institution, and perfect them in our art.

FERROUS-OXALATE DEVELOPMENT FOR DRY PLATES.

Owing to the simplicity and uniformity of this developer, we recommend its use whenever practicable. It is capable of giving the very finest results, and is used exclusively by many of our customers.

Formula.—Oxalate: Dissolve a quarter of a pound of oxalate of potash in twenty-two ounces of water, and filter. Iron: Prepare a saturated solution of common protosulphate of iron.

Development.—Lay the exposed plate in a tray, and take enough oxalate to cover it well; add to it about one-seventh its volume of the iron solution; mix and apply to the plate, taking care to cover it with one sweep. The image will appear on a properly exposed plate in ten to twenty seconds, and the development should be continued until all but the deepest shadows are well darkened. Rinse, fix, and wash thoroughly. The plate may be wetted before the application of the developer, if preferred. If extra intensity is desired, add half a grain of bromide of potassium to each ounce of developer. This is essentially the same developer given in our general directions, but many will prefer to buy the oxalate of potash instead of making it. To make clean work, dust off the plate before exposure, and filter the developer. Air-bubbles on the plate are avoided by not draining off the soaking water too closely.

Intensification.—When a plate, from over-exposure or any other cause, requires intensification, use the following: Prepare saturated solutions of iodide of potassium, bichloride mercury, and hyposulphite of soda. Pour the mercury into the iodide until it retains a red color after shaking. Now add enough of the hypo. solution to dissolve the red precipitate. If the solution refuses to intensify, there is too much hypo. in it; therefore prepare another portion of the mercury-iodide solution, and add to it enough of the intensifier already made to clear it up, instead of the hypo. This solution will keep. The intensifier should be diluted to about half strength, filtered, and applied to the plate after fixing, and the plate must be *thoroughly washed* both before and after its application.

Eastman Dry Plate Co.

TINTYPES.

BY G. W. BABB.

In the March *Philadelphia Photographer*, Mr. Wood comes to the defence of the long and unjustly abused tintype. He defends it in a mild way and from a low standpoint—that simply of profit. Had he been more courageous, he doubtless could have made a much better defence for it. It takes some considerable courage, I am aware, to stem the popular tide of opinion in the profession. It is fashionable to decry this kind of picture as vulgar, the least artistic, and as being unworthy the attention of any aspiring artist. This is the prevailing opinion among those who do not make them, or do so only at rare intervals.

It seems to me that among the individual members of the profession there is too little exercise of independent judgment. We see, for instance, to-day one thing all the rage, something that has come to us with the endorsement of some influential person, to-morrow it is set aside, with none so poor as to do it reverence. This is again replaced by something else, which two-thirds of the photographers of the country will indorse by certificate, stating that no gallery can afford, for a single day, to be without this wonderful improvement. It is a nine-days' wonder, and disappears. The enthusiastic individuals who went off at half-cock do not like to be reminded of it.

I do not intend this as an argument against trying the new, for I am aware it is only in this way improvement can come. I desire to show that we are altogether too much addicted to falling into the narrow rut of received opinion and fashion, with no attempt to extricate ourselves. Now I predict that when some one of our best known and respected artists shall expend as much time, taste, and talent in developing the tintype as he has in making the greatly improved photograph (and some one will yet do it), he will produce something (under another name, perhaps) which will be the fashionable, high-priced picture, and these same critics who now decry the tintypes will, true to their instincts, be ready to accept this novelty, and will not wish to be reminded that they ever denied its being the most truthful likeness ever made.

That the tintype is not artistic is not the fault of the picture, certainly, but of the artist (?) who made it. The same amount, precisely, of artistic taste and fine judgment may be expended as upon the photograph. Why not? A fine pose is just as effective in the one as the other. Fine lighting, though not the same as that used for the best effect in a negative, is just as desirable, and offers just as wide a range for the taste and judgment to display itself.

The better class of photographers who only make a tintype at rare intervals seldom or never make a good one. They always over-time and over-develop, and the result is a very poor, flat picture. They are also apt to use the same kind of light as they would to obtain a soft, well-modelled negative, and the result will be a lack of brilliancy, upon which the tintype depends largely for its beauty. If these critics judge of the specimens they produce under these conditions, no wonder they think that style of picture is the least artistic.

Not the least recommendation for the tintype, is the fact that artists always want that kind of picture to paint from, because they feel that it is a *likeness*, which cannot be said of all photographs, in view of the pernicious practice of strengthening negatives, and bad and too much retouching.

Some years since I had a young man to operate for me (this was when, owing to location, my work was mostly tintypes) who made that class of work as artistic in pose, light, accessories, and all that makes a good picture, as any photograph can be. This same operator has since made a large reputation in this city and New York; but he has, perhaps, made nothing more artistic than many of the tintypes of that time. That there are many very ignorant men engaged in making this style of picture is too true. Ignorant not only of their business but of a common-school education, and all the amenities of respectable society. They have entered this branch because they could get started for a trifle, and eke out a living, with no attempt to do good work. This class of work is not the criterion by which to judge the capabilities of the tintype.

I fear I have already made this article too long for the *Philadelphia Photographer*, and so I will bring it to a close by expressing the opinion, born of knowledge, that the affectedly despised tintype is capable of very great artistic results. I hope in the next article Mr. Wood gives us that he will gain courage to defend it *for its own sake*, as I doubt not he can well do.

HOME-MADE GELATINO-BROMIDE DRY-PLATES.

No. 2.

BY JAY DENSMORE.

(Continued from page 85.)

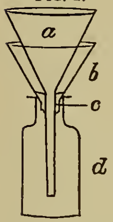
In this article I propose to tell how I make gelatino-bromide dry-plates, that, with me, give much better and more uniformly good results than any similar plates I can find in the market, ready made. They are not nearly so rapid as the *claims* of most of the commercial plates, but they work in about one-third or one-half the time of a good wet collodion plate, and are fast enough for me. I used to believe the stories about the "ten," "twenty," "thirty," and "forty" times greater rapidity of the gelatin plates over the collodion, but I don't now. I was afraid to openly express such disbelief, however, until I read Dr. Vogel's correspondence in the *Photographer* not long since, wherein he declared in substance that such claims were wholly mythical, visionary, etc., existing only in vivid and heated imaginations. The doctor says that he finds gelatin plates to be about two or three times more rapid than wet plates, and he gathered such experience from experimenting with the best English commercial plates. He also says that, with the same plates, when he wishes to make a negative of extra good quality, rich in detail, in shadows, etc., he does better to give an exposure but *little short* of that necessary for wet plates. My experience accords with his in this respect; and as I found the prolonged emulsification necessary to produce extra sensitiveness beyond such a point to have a deleterious effect upon the setting qualities of the gelatin, I sometime since abandoned all efforts to make a plate possessing more than double or triple the sensitiveness of wet plates.

I wish to make my method clear to the comprehension of all photographers, and shall, therefore, endeavor to give as many reasons as possible for my several methods of manipulation; but, to avoid confusion, I will first tell how I prepare four ounces of emulsion, and how I coat and dry the plates, reserving the comment and explanation for a future article.

First, weigh out carefully 200 grains of Cox's gelatin, and place it in a wide-mouthed bottle of about a pint capacity. To this add 5 ounces of distilled water, and let it stand until the gelatin is thoroughly soaked through; then place the bottle in a dish of warm water at 110° F., and let it stand, shaking occasionally, until the gelatin is all dissolved. Then add 100 minims of the white of a fresh egg, and shake the bottle until its contents are beaten to a froth. Then place the bottle in a dish of warm water at 120° F., and quickly raise the temperature to a boil; renew and strain through a piece of white flannel cloth into a wide-mouthed bottle; then filter through the emulsion filter for future use.

My emulsion filter is very simple and easily made, and is illustrated by the annexed diagram, Fig. 1. B, is a tin funnel, with its spout cut off to about an inch in length; A is a glass funnel, with quite a long spout, so as to reach nearly to the bottom of the bottle, or dish, filtered into; a rubber bottle-stopper, C, that fits the neck of the tin funnel, B, is perforated with a hole to fit the spout of the glass funnel, A, and they are all put tightly together, as shown in the diagram. When in use, the spout of the glass funnel, A, is fitted quite tightly with a wad of filtering-cotton previously wet with alcohol, and rinsed with distilled water, and the space between the tin funnel, B, and the glass funnel, A, is filled with water at 110° F.

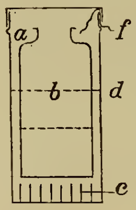
FIG. 1.



While the gelatin is filtering, weigh out forty-eight grains of Powers & Weightman's bromide of ammonium; place it in an eight-ounce graduate and add to it one-half ounce of distilled water. Stir with a strip of clear glass until it is all dissolved. Also weigh out seventy-two grains of Powers & Weightman's nitrate of silver; place it in a four-ounce bottle and add to it one ounce of distilled water, and shake until dissolved; place the graduate containing the bromide of ammonium solution and the bottle containing the nitrate of silver solution in a basin of warm water at 110°F. When both are well warmed add one-half ounce of the warm gelatin solution to the bromide solution, and mix thoroughly with the stirring-rod. Thus far the work may be done in the light, but no further. Now move all to the dark-room (which must be absolutely dark to all light except dark-ruby, red; I use a red lantern, and not a particle of any other light can enter it when the door is closed), and add the silver solution drop by drop to the graduate containing the bromized gelatin solution, stirring all the time with the glass rod. Continue to beat the mixture thoroughly with the stirring-rod for about a minute after the silver solution is all added; let the graduate of emulsion stand until it cools nearly to the setting point, then add to it six ounces of good common alcohol, and let it stand until all the emulsion precipitates, and the mixture of water and alcohol is clear, or nearly so. This will not require more than an hour, ordinarily. Now drain off the water and alcohol carefully from the precipitated emulsion; add one ounce of alcohol to the precipitate; let stand a few minutes and drain again as dry as possible; place the graduate containing the precipitated emulsion into a basin of warm water, at 110° F., and add to it distilled water, warmed to 110° F., to make one and one-half ounces, and beat with the stirring-rod until the precipitate is all dissolved, and all is well warmed. Pour the emulsion into an eight-ounce bottle, place the bottle, without its stopper, in the emulsion can, in warm water at 110° F., and raise the temperature gradually until the water in the can boils; let it boil ten or fifteen minutes. The emulsion can being light-tight, the boiling may be done in the light, on an ordinary stove.

My emulsion can is illustrated in Fig. 2. A is an ordinary tin canister with a tight cover, C is an old brass clock spring coiled up in the bottom of the can to prevent the emulsion bottle, B, from touching the bottom of the can while on the stove; be careful and not fill the can so full of water that it will boil over into the bottle of emulsion.

FIG. 2.



The can should be made to fit the bottle, and have only a half inch space between them, and the water should not raise but a little over one-half way up the bottle when in the can; before placing the cover upon the can, lay a piece of rather coarse tissue, F, on its edge to allow space for the steam to escape while boiling, and be sure that the cover fits so tightly that the steam pressure during boiling will not lift it.

When the emulsion has boiled sufficiently, remove the can containing it to the dark-room, and remove the cover. Let it stand ten minutes; take out the bottle of emulsion, cork it, and shake it thoroughly; replace it in the can again, and let it stand in a dish of water at 100° F. an hour or two, shaking occasionally. Then add to the emulsion two and one-half ounces of the gelatin solution warmed to 100° F., and shake thoroughly. Replace the bottle in the can again, and let it stand in a dish of warm water at 100° F. two hours longer, shaking occasionally; then add twenty minims of a ten-grain solution of chrome-alum, and shake well; pour out into the emulsion filter, and when filtered, coat the plates. Have at least twenty-four hours before wanted for use, as many pieces of glass as will be necessary to hold the batch of emulsion, thoroughly cleaned with potash, and placed, one by one, in undiluted commercial nitric acid. While the emulsion is preparing, take the glass from the acid, rinse thoroughly under the tap, and flow one side of each piece with the substratum, prepared as follows:

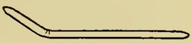
Gelatin Solution, at 110° F., .	½ ounce.
Distilled Water, at 110° F., .	3½ ounces.
Chrome-Alum Solution (20 grains to the ounce), . .	1 drachm.

While preparing the plates, keep the substratum in a dish of warm water at 110° F. Flow on enough of the solution to cover the plate, and let the surplus drain into the sink. Place the prepared glass in a negative rack away from dust, and where they will be handy when wanted for use, and let them dry thoroughly.

When ready to coat the plates, have a piece of plate glass about 18 x 30 in size, carefully levelled upon a table in the dark-room. Have the emulsion filtered into an eight-ounce graduate, and be sure that the spout of the emulsion filter reaches near the bottom of the graduate to prevent the forming of air-bubbles. Take a minim graduate, and tie a string around it at the point indicated by allowing one and one-half minims for each square inch of surface to be covered by emulsion. For a 5 x 8 plate, which contains forty square inches of surface, tie the string at the 60 mark, etc. Place the graduate containing the filtered emulsion in a dish of warm water at 100° F., take a prepared plate from the rack, fill the minim graduate with emulsion up to the string, and then pour it all upon the centre of the plate. With a glass rod carefully spread the emulsion over the surface of the plate; then carefully tilt the plate from one corner to the other, causing the emulsion to flow in an even sheet over it, then lay it upon the level glass to set.

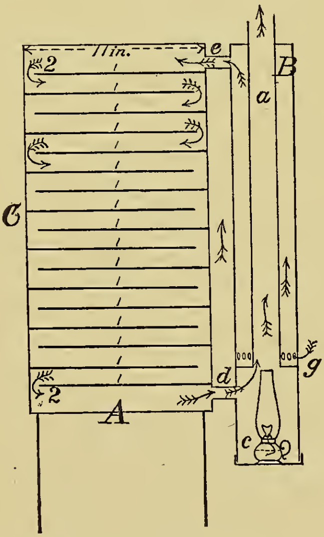
The glass rod for spreading the emulsion is prepared by taking a piece of three-eighth glass tubing one foot long, closing the ends in the flame of a spirit-lamp, and making a slight bend three inches from one end, as illustrated in Fig. 3. Continue coating plates until the sheet of levelled glass is covered, when those first coated will be set and may be transferred to the drying-box. The drying-box is illustrated in Figs. 4 and 5.

FIG. 3.



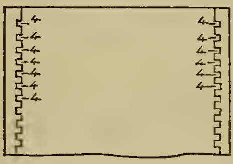
A is an oblong box 7½ x 11 inches, and 30 inches high, inside measurement. B is a tin tube 4 inches in diameter, and a little longer than the height of the box. *a* is another tin tube, 2 inches in diameter, reaching from the diaphragm, *g*, in the large tube, up through its top. The tubes *d* and *e*, each 1¼ inches in diameter and 4 inches long, connect the large tin tube with the box, the tube *e* entering the box 1 inch below its top, and the tube *d* 1 inch above its bottom. The shelves, 2, 2, are each fastened tightly in the box, but are each only 10 inches wide, thus leaving a

FIG. 4.



space at their ends 1 inch wide between the door of the box, C. The large tin tube, B, is perforated with a row of half-inch holes just above the diaphragm, *g*, to admit air. The lamp, *c*, is placed in the bottom of the large tin tube. The sides of the box, A, between the shelves, 2, 2, are full of grooves, 1¼ inch deep, 1¼ inch wide, and 1¼ inch apart, as shown in the sectional figure, 5. I use only 5 x 8 and 8 x 10 plates; and when I begin putting plates in the box, I slide the first plate into the first upper pair of grooves, leaving it so that the door of the box will touch it when it is closed. If the plates are 5 x 8, I put two plates into each pair of grooves, and if 8 x 10, only one. The second plate I put in the second pair of grooves, but slide it back against the back of the box. The third I lean against the door, and the fourth against the back, and so on until the box is full or the batch is all in. The figures 1,1,1,1,1 show the position of the plates in the box. When the plates are all in, I close the door, C, which fits tightly, and light the lamp in the bottom of the tin tube. I use a small night-lamp, burning kerosene oil. The air for the lamp has to come through the tube, *d*, and out of the box, A. The heat of the lamp warms the tube, *a*, also warming the air in the space between the two tubes, which rises and passes into the box, A, through the tube, *e*, its place being supplied with cold air through the holes in the large tube just above the diaphragm, *g*. A current of warm air (as shown by the arrows in Fig. 4) is thus kept up over the plates, and they will dry very quickly. The upper ones will dry first, and, as they dry, it is well to shove them in against the back of the box, thus giving the warm air a better chance at the plates below. A batch of plates, from four ounces of emulsion, put in in the evening will be nice and dry in the morning.

Fig. 5.



Next month I will consider development.

Wilson's *Photographics*, the new book on photography, will be ready in a few days. $4.

BLISTERS.

A few Hints to Manufacturers of Albumenized Paper.

BY D. BACHRACH, JR.

I do not know exactly how many articles have been written on this blistered subject, nor how many theories advanced, and it is not without some trepidation that I venture to approach it, lest I meet the fate of "Pinafore" quoters. I will here give the result of some very careful observations and experiments.

As is well known, this trouble originated with the introduction of double-albumenized or "extra-brilliant" papers. The question naturally occurred, what is the difference in the chemical composition of the double-albumenized paper *after silvering*, as compared to the single or ordinary kind, as with the latter it never occurs? From long experience with chemical reagents in connection with gelatinous compounds, I was not long in answering this question. The action of nitrate of silver upon albumen, besides reducing the soluble chlorides into chloride of silver, is precisely similar to that of alum upon gelatin. Wherever it comes into contact it immediately coagulates or makes it insoluble. *But this insolubility only affects the surface, or extends but a very minute distance, unless the action is continued a very long time.* The reason for this is obvious. Coagulation means the closing up of the pores, and of course makes further action almost impossible. Now, therefore, in the case of heavily albumenized papers, we have a thin layer of coagulated albumen on the surface. If silvered the usual time, and a heavier layer of uncoagulated or soluble albumen is underneath *and next to the paper*, the result is as follows: As soon as such paper is put into the hyposulphite of soda solution, which is a powerful solvent, such of it as penetrates the pores of the paper at once acts upon the soluble albumen, causing the latter to swell by the capacity of absorption, and thus forming what we know as blisters. By pricking one of them open while wet, the soluble albumen comes out and the film of coagulated albumen then lays flat against the paper. Now, in order to test this theory thoroughly, I have at various times taken such paper as was known to blister (unless salt was used freely as a remedy), and instead of *floating* it on the silver solution, I *immersed* it therein, allowing it to remain as long as ten minutes, *so as to allow the silver to act through the paper on the under layer of albumen,* and thus not only coagulate it there, but also cause perfect adhesion to the paper and avoid unequal expansion and contraction. The result was, of course, prints deficient in contrast or richness of tone (like over-silvered paper), *but all blistering invariably disappeared.* Any one can satisfy himself on that point easily. The remedy is apparent to me, and radically, too. Suppose the paper, before albumenizing, were impregnated with a powerful astringent which should coagulate the layer of albumen next to the paper, and thus cause perfect adhesion, leaving the silver to complete the work in front, and the remedy is complete. But have we such an agent which will not have a deleterious effect, nor interfere with the subsequent operations? I confidently say we have. It is carbolic acid. This is not only a powerful astringent, coagulating both albumen and gelatin instantly when strong enough, but is also a splendid disinfectant, and would undoubtedly prevent the decomposition of the albumen which takes place in all papers, as witness the offensive smell emitted by them. To what extent the instability of albumen prints is due to this cause I cannot tell, but suspect there may be more than we dream of. One thing is certain, it has no deleterious effect, as I have used the acid in the salting solutions of plain paper. My plan would be to soak or pass the paper through a solution of, say, one ounce of C. P. carbolic acid in twenty ounces of water and let dry, and then albumenize it. If a method has not already been found to remedy this defect, it would be worth the while of manufacturers to give this a trial. It may be that the proportions here given are too strong. A few experiments would tell. The odor of carbolic acid is not very acceptable, but is far more so than that of decomposed albumen. Who will give it a trial and let us know?

SOME MORE THINGS FROM DOWN SOUTH.

Did it ever occur to you that there could be easily made two pictures, quite different, of the same subject from the same negative, even the likeness being a little off? Just follow me to the printing-room, and we will take a card-bust negative and a piece of silvery paper cut *lengthwise* of the sheet. After printing, lay it away and proceed to make another print cut *crosswise* from the sheet. So far so good. Now wash and tone both prints alike, and when they are finished, compare them, and you may be astonished at the results. In the one printed lengthwise of the sheet you will have an exact reproduction of your negative; while the print from the paper cut crosswise of the sheet will have an elongated countenance that is only seen at a first-class funeral, and seldom then. Yet, once in a while, I find this thing quite an advantage, especially when some old sea-captain, with his whiskers sticking out like a pair of epaulettes and his nose spread all over his face, comes in, or a young lady who insists on wearing her hair on a line with her eyebrows, and her neck and part of her chin enveloped in a huge scarf; then I instruct the printer to have those negatives printed from paper cut crosswise of the sheet, the *stretch* of the paper improving both of these cases, but never on a thin-visaged subject, unless you wish him to look as if he had bought on the wrong side of the stock-market and felt exceedingly glum. I have now before me a card bust where the head is over one-eighth of an inch longer in one than in the other, both from the same negative, caused from the stretching of the paper (not the story) through the carelessness of the printer.

Another thing—however, you may have been there yourself; if so, don't read it—I was troubled for some time by the albumen softening almost, if not quite, to a mush after the prints had been properly toned and fixed, but upon being washed to get rid of hypo., then the "ball opened," and kept open until several days had passed, and I felt like passing (away) myself. I asked the advice of some of the "big guns." Some answered me very kindly and just gave it up, as it must be a thing peculiar to a southern climate, and others confidentially told me that it was caused by gelatin being used on the paper instead of albumen, it being cheaper. This thing looked so plausible I took it in, and changed my paper, with the usual results, if not more so. Another told me I had too much soda in the toning-bath, while another said my hypo. was too acid, while still another well-meaning friend told me to reduce my printing-bath; but as things were getting pretty well reduced now, including "snips," I added alum to the silver, then ammonia, then acid, and then—oh, then I threw the whole thing out, made up a bath of silver and water, fifty grains strong, and that's all, and my trouble was over.

Now, as to the cause: my printing-bath had become foul by being too acid by a very large majority; and although the prints and paper looked as fine as need be, still, when they were being washed, after fixing, the albumen just formed itself in one grand mush, and to mount them was next to impossible. Still, on the other hand, I should caution you against having the solution alkaline by much of a majority; if so, upon drying your paper after silvering, you will find you have a fair quality of plain paper, the albumen being left in the silver, and you left in the lurch.

Down South.

OUR PICTURE.

As a further help to those who are ambitious to excel in the art department of studio work, we make up a mosaic picture this month from sixteen of the beautiful examples of photography sent us very kindly for the purpose, by Messrs. Marc & Schlumm, Fourteenth Street, New York.

These gentlemen have been photographing together only about a year, but are doing a wonderful business, mainly with theatrical people and musical artists. The size they usually make is 7½ x 13, mounted on black, gilt-bevelled edge, heavy cards, although they also do many imperials or cabinet size. The sixteen pictures sent us for our purpose were of the former size, and made upon 11 x 14 plates. They were examples of their ordinary run of work, and certainly are of a very high average of artistic excellence, especially in composition and arrangement of the subject. It will be readily seen that, as another evidence of culture, these artists believe in Mr. Seavey's unrivalled backgrounds, and use them in great variety. The positions are mostly made by Mr. Marc personally, who has had photographic experience in Paris, London, and New York previous to this gallery being opened. The studio has a north exposure, the wet process is used, and a Euryscope Voigtlander lens is preferred for their work, to one by Dallmeyer in their possession. We are greatly indebted to them for their willingness to aid us in educating the less talented by placing suggestive pictures before them, since it is so directly in contrast with the spirit we often meet when applying to some of our best artists for a similar favor. We hold that every man *ought* to try to do some good to the humbler ones of his craft in helping to elevate and improve them. Besides, in thus doing, he helps himself. If the right spirit was shown, we believe the best possible pictures for our magazine would be volunteered in such number that we could not use them all. Again we commend Messrs. Marc & Schlumm for their liberality and for their elegant productions.

We shall have other mosaics during the year, and probably some of "foreign extract." Our prints were made at our own rooms, on the Dresden paper supplied by Mr. G. Gennert, New York.

SCOVILL MANUFACTURING CO., WATERBURY, CONN.

The above is the inscription on the side of the cover of a very handsome volume which came to our desk while we were preparing the matter for this issue of our magazine. It is a complete history of this great and world-renowned manufactory from its birth in 1806 to the present time. It is exceedingly interesting to read the record of such a corporation, which, started as a tiny "button shop," now needs acres of ground to give space for its many factories. The work before us, however, only tells of the Waterbury branch, and not of the others at New Haven and New York, and records more the history of the button and metal trade than that of what pertains to photography.

It also contains as a frontispiece a fine steel engraving of the Company's works at Waterbury, followed by portraits of the original founders and the present directors. The portraits of Messrs. J. M. L. and W. H. Scovill, are fine steel engravings, while those of Frederick J. Kingsbury, Esq., President; Mr. C. P. Goss, Treasurer; Mr. M. L. Sperry, Secretary; Messrs. Samuel W. Hall (deceased), S. M. Buckingham, D. F. Maltby, Thomas L. Scovill, and W. Irving Adams, directors, are all albertypes by Harroun & Bierstadt, New York.

A sketch of each of these gentlemen is given, and the work itself says in closing, "It will be seen from this record, that while the Scovill Manufacturing Company has a history of continuous business going back to the beginning of the present century, antecedent to any of its competitors and antedated by but few manufacturing concerns in this country, its management is now in the hands of men, both in the factory and in the warehouse, who combine with ripe experience the enterprise, vigor, and activity of the prime of manhood—the assurance that the prestige, reputation, and large success, so honorably earned by the brothers whose name the Company bears, will be maintained for many years." And, we may add, it is these men upon whom we depend for our growth and prosperity to a great degree. The book is for private use only.

PHOTOGRAPHY ABROAD.

Photographing with Petroleum Light.—It may be of interest to state that I printed in one hour, with the sciopticon, a thorough picture, of a diameter of about forty-five m.m., upon two-weeks old chloride of silver paper (fumed) through a gelatin negative. The negative had been taken with sciopticon illumination from a bust ("Flora," by Canova, forty-five centimeters high).

I have used gelatin emulsion-paper with much success, for enlargements (three linear) with the sciopticon.

Pyrogallic developer is unfit for use. Eder's oxalate of potassium developer gives positives of brownish color.—V. Schuman, *in Photogr. Archiv.*

Treatment of Emulsion Plates.—Mr. Schlegel, finding that washing the gelatin emulsion, as generally practised, takes up too much time, now washes the emulsion on the plates themselves. He spreads the emulsion without washing it, then, when it is fixed, he plunges the plate into cold water for some time.

The same author recommends a developer for gelatin, with which he obtains excellent results. The following mixture is made: Concentrated ammonia, 50 c.c. (1 fluid ounce, 5½ drachms); bromide of ammonium in 50 c.c. (1 fluid ounce, 5½ drachms) of water, 5 grammes (77 grains); Javelle water, prepared by dissolving 10 grammes (154 grains) of chloride of lime, and 10 grammes (154 grains) of carbonate of potash in 50 c.c. (1 fluid ounce, 5½ drachms) of water.

In using, take 200 c.c. (6 fluid ounces, 6 drachms) of water, and add .5 gramme (8 grains) of pyrogallic acid, and 10 c.c. (3 fluid drachms) of the above mixture.—*Photo. Archiv.*

Prints made with Fatty Inks on ordinary mat-paper are much improved when it is possible to give them the brilliancy characteristic of prints made on albumenized paper. Several methods are used for obtaining this result. The best of all, according to Dr. Eder, consists in the use of a water-varnish, which is prepared in the following manner: Boil, from fifteen to thirty minutes, from three to five parts of marshmallow root in small pieces, in three hundred parts of water. In the decoction thus obtained introduce twenty-four parts of crystallized borax reduced to powder, four parts of anhydrous carbonate of soda, and one hundred parts of pulverized white gum-lac, and again boil. The gum-lac soon dissolves; when cold filter through cotton. This varnish is used cold; the paper is plunged into it for a few moments, and is hung up to dry.

Burnishing gives to prints thus treated more brilliancy and polish, but this operation is not necessary, especially when the varnish has been well filtered. — *Photo. Mittheil.*

WILSON'S PHOTOGRAPHICS.

As announced some time ago, we have in preparation—and now almost ready—a new *Lesson-Book* on photography, which shall bear our name, with the coined word *Photographics* added, as above.

If we could separate author from editor, we should naturally want to praise the work to our readers. As it is, we dare not do more than to present a page or two from it below, to give the reader an impression of what it is like, and then leave it to your tender mercies for patronage, if you think it will be useful to you. *Photographics* is the "old, old story" of photographic work told over again in language that we have tried to make easy for the novice to understand. This is in the coarse type at the heads of the pages, in numbered paragraphs. To this are added below, most copious notes, also numbered, gathered from the large store of contributions to the literature of our art by the very best practitioners in it, which has come to our hands during an editorial career in this line of eighteen years, nearly. It would have been easy for us to have embodied all these thoughts in our own matter, but it seems only just that the giver should be known to the partaker, therefore, we have added the name of the generous author to each note, and we go down to posterity together. We believe this has not been done before, so that not only in this respect, but in others, *Photographics* will be found to be made up on a new plan. It will contain everything we can remember that is of practical use, and yet we already see many imperfections in it.

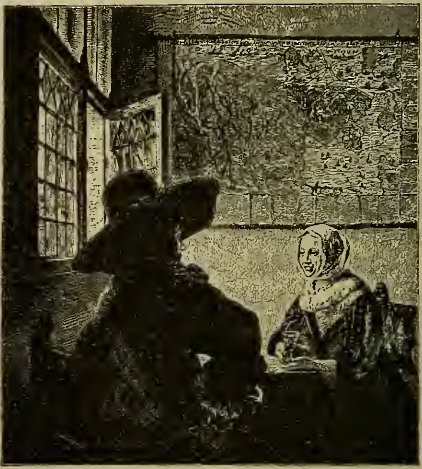
It has been the *work* of years, and we are hoping for the *reward* of years from it. If it *does good* by being acceptable and useful to the craft, we shall be most happy. It is honestly put forth with this hope. A partial list of contents is given in the advertisement. It will be seen that the first lesson is on the *art* of the art, and over sixty pages are devoted to it with beautiful illustrations. The bromo-gelatin emulsion process is given in great fulness up to date, and that lesson is very complete.

As a work of book-making art, we have spared no money to make *Photographics* a credit to us all.

We have already spoken too immodestly about it, and if one more indiscretion will be excused, we add in conclusion that in answer to "the requests of many friends (?)" a fine phototype cabinet of the author, by Mr. F. Gutekunst, Philadelphia, will serve to stare at you immediately upon the opening of the book. It is literally a fine example of *angular* composition.

The following extracts are from Lesson A, and are given to show the plan of the book.

77. In the foregoing remarks, your attention has been drawn outside the studio, and to many this may seem of little practical value as regards their every-day work. But this is not so, for the same principle prevails both within and without. As a partial proof of this truth, witness this fine copy of "The Soldier and the Laughing Girl," by J. Van der Meer, of Delft, now in the Double Collection of Paris. It is a grand study in chiaro-oscuro, a model for photographic imitation, and seems to have been made for this very purpose. It will bear the closest study.



78. It is also a fact that in photographic portraiture it is not considered desirable to

illuminate the sitter with direct sunlight; but, if we wish to produce the broad, open effect of daylight, with well defined and equally illuminated line, we must use a broad, open, well diffused light, so arranging the drapery of figure and accessories that we obtain enough of sharp and well-defined shadows to give the necessary pith and precision to the whole.

79. Careful attention to this point will give a much greater effect of brilliancy and light than any amount of over-intensifying. Again, if we wish to produce those effects which might be styled *a la Rembrandt*, we must use a more direct, concentrated light, and so arranging the figure or sitter that the light falls upon and fully illumines the portion of the figure we wish to give the greatest prominence, allowing the other parts, both of the form and outline, to be partially lost in shade. Do not misunderstand, blackness is not meant. By this means of lighting, some very grand effects are produced. Many have supposed, however, that this style is conventional and unreal. Such is not the case, for the same effect may be seen in any apartment which is but partially illuminated, whether by artificial means, or by the opening by which the daylight enters being small in proportion to the size of the apartment. Both ways are correct in principle and equally good if suited to the subject; the former will be found most serviceable for general use, and may be considered as nature's sunshine, while the latter may be appreciated as we do nature in her grander moods, as in the coming storm or the play of the forked lightning.

80. If you are a landscape photographer, having selected your point, the proper time of day to give the best effect of light and shade, look closely into nature, mentally note down its most observable peculiarities, and when you have completed your negative and printed from it, compare notes—those mentally taken and those in the photograph before you; find out what of nature's beauty you have caught, and where you have fallen short. Do not be content with the fact that you have obtained a passable, nay, a good picture, for by such close observation you will acquire a better knowledge of the laws of nature, discover the weak and strong points of photography, and thus be able, as experience ripens and increases, to assist the former and make good use of the latter.

NOTES.

77. As to the study of light, I follow it intuitively. I find my models everywhere, in parlors, halls, churches, offices, shops, railway cars; wherever there are windows or gas-jets, and heads for the light to shine upon, there are my studies—sometimes more, sometimes less interesting, but studied all the same. Frequently in common conversation, or in the course of a business transaction, I give as much attention to lighting the head of my model as I do to the drift of his talk or the character of the business in hand. We may be introduced to a stranger, and while assuring him of the pleasure we have found in his acquaintance, and wondering if it will rain before night, we have discovered that his nose is a little out of true, and that a three-fourths face away from the light will suit him best.

In this study or pursuit much is to be gained. We learn to recognize the true from the false, the good from the bad. An education may be so acquired that would be obtained in no other way. We see and fix in the mind many peculiarities and effects of light that by accumulation become knowledge. There may be a lesson in the shadow thrown from a hitching-post, if we look for it, as much as there are "sermons in stones."

These hints and bits of observation, picked up in promiscuous ways and places, carried into the operating-room, give power to the possessor of them, and make him master of the situation. When we once get into this way of "trying on," we are not likely to abandon the habit.—J. F. RYDER.

78. Place the sitter so the light is diffused. I open the light for forty-five degrees usually. Why use that angle? Why not straight up overhead? The reason is, that I want to show the lines of the brow, the lines of the nostrils. I want to show the shadow falling off to this direction so as to give the shape of the nostrils. I do not want to show it as if I were standing under you and looking up into your nose. I do not want to throw a shadow on the noblest part of the human countenance.—A. S. SOUTHWORTH.

79. In these likenesses there is no striving for transitory effect. No part of the face or head is put in deep shadow, all is clear and sunny. There is no flinching from hard work. Wherever shadow is used, the modelling is continued perfectly throughout the whole. In the best

faces of Titian no shadow is apparent, yet there is no flatness; they are full and round, like nature herself. And some of the best heads of Rembrandt, fond as he was of shadow tricks, are painted in this broad and sunny way. These great artists studied to give the sum of human life—not five minutes of it.—CHARLES AKERS.

80. Among some photographers the impression seems to prevail that the reflection of the image upon the object-glass is to be depended upon exclusively in judging of the proper lighting. Let me state that these glasses are great flatterers and deceivers, as negatives frequently testify when left to them. Should you be using a number of instruments, the chances are the color of each glass is different, which makes them still less reliable as guides. Trust your eyes in arranging your lights, and when once accustomed to the manipulations in that particular, you will prove yourself competent in your position, and have secured much that is all-important to success in your profession.—A. SIMSON.

Photographics will be handsomely bound in cloth, gilt, and will be sold at $4.00. (For an actual sample page and the quality of paper used, please refer to the advertisement.)

Editor's Table.

PICTURES RECEIVED.—Messrs. TAYLOR & JONES, Asheville, N. C., send us a number of stereoscopic views of pretty bits in nature, with which their locality abounds. Asheville is an attractive summer resort in the mountains, much frequented by pleasure-seekers and invalids, and, judging from the pictures before us, it is well worthy of its popularity. From Mr. KARL KLAUSER, Farmington, Conn., samples of his various methods of picture-making. One is a group, made by the light of a kerosene lamp, exposure five minutes; another, a cabinet view of the river, both made on dry plates. Mr. KLAUSER is a real artist. Still other dry-plate prints, of 8 x 10 size, come to us from Mr. A. C. McINTYRE, Morristown, N. Y. We are glad to see the growing tendency among our readers for trying emulsion plates. Mr. LATHAM, Bradford, Pa., sends us a sweet little baby picture, cabinet size, full of life and expression. Messrs. BROADBENT & TAYLOR, 914 Chestnut Street, Philadelphia, present us with a very fine cabinet bust portrait of ex-president J. F. RYDER, so well known as the presiding officer at our late Photographic Convention at Chicago. The picture was made when Mr. RYDER came East to attend the committee meeting in January. Two *very good* cabinet pictures from Mr. A. J. SHEPLER, Conshocton, Ohio. Messrs. D. FILSON & SON, Steubenville, Ohio, send us two cabinet pictures. One of a lady in graceful attitude, shading her eyes with her hand, while she seems on the lookout for *somebody*. The other gives us two little boys, apparently twins, seated on their velocipedes, just ready to start out on a race. From Mr. WILL. H. ALLEN, operator for Mrs. LOCKWOOD, Ripon, Wis., some very nice cabinets and panels, which are "all of his own production." Mr. ALLEN is but young in the business, and shows decided feeling in his work, especially in his compositions. His technical photography is also excellent. Mr. H. R. CORNELL, Ligonier, Ind., favors us with some excellent examples of his work. One of a fine old German matron, is a splendid study, while that of a despondent, demoralized, old "office-seeker," is a marvel of sharpness and good photography. Mr. J. F. RYDER has sent us several of the sweetest pictures of children it has been our pleasure to examine for a long time. The little darlings are so posed as to each tell a story of joy or grief, or expectancy, or some other element of character, and they have all behaved splendidly. As photographs, and examples of artistic printing, too, they are unexcelled. But, better than all this, Mr. RYDER has favored us with the negatives, and we are trying to equal his printing of them for a future "Our Picture."

WANTED.—We are still *very* much in want of copies of the journal for August, 1880. If any of our readers are willing to supply us, we will gladly pay fifty cents each, full retail price, or give a copy of ROBINSON'S *Pictorial Effect* for each copy.

MR. H. J. THOMPSON, Chicago, favors us with his "Spring, 1881" catalogue of mouldings, mirrors, cornices, chromos, etc., in which articles he deals largely. "Read and preserve." Free.

Anthony's *Bulletin* for January gave us all a welcome surprise in its embellishment, which was none less than a photo-group, by Louis Alman, of the grand triumvirate of 591 Broadway, N. Y., namely, the publishers of the *Bulletin*. But the admirers of this group of famous men will find them in the same predicament as the corporal in the famous comedy of "Ours," with his twins—"cawn't tell tother from which," for in the copy before us, we see Mr. H. T. Anthony with the name of "V. M. Wilcox" printed underneath him; the gallant young colonel striving to make a show of age and experience by sitting over the well-known name of E. Anthony, while the latter gentleman stands in the centre, over his brother's superscription, looking blandly on. The whole trio are smiling, like priests of ancient Greece. They have kept it up many years, and we wish the remainder that follows may bring them less of care and worry than the past.

"The Camera," Vol. I, No. 1, (published by Mr. Abraham Bogardus, New York, lies before us. It is a four-page monthly journal, and is filled with matters photographic. Several spicy jokes enliven its columns, and various *very good hints* are given in regard to sitting for one's portrait.

McCollin's *Price Current of Photographic Goods*, for March, is received. From an ordinary price list this publication has grown into a fourteen page pamphlet, with various short articles of interest and information to photographers.

Mr. Samuel G. Nixon desires us to correct the statement we made in our last issue, that he established himself in the art of crayoning in 1867. It was in 1878 instead. Mr. Nixon is as conscientious as his work is good. See his new advertisement in "Specialties," and give him a trial.

Our cover outline this month was photo-engraved by Messrs. Crosscup & West, from a photograph sent us by Messrs. Trapp & Munch, Friedberg, Germany. It is a very pretty composition, indeed, and well worthy of study. The name of the photographer we do not know.

To J. H. F.—It is very strange that "Mr. Fitzgibbon won't tell who his interesting correspondents 'Little Carbon' and 'Scribbler' are." Perhaps it would be a breach of editorial confidence. If you want to know real bad, as "every Yankee has a right to guess," we will "guess" for you that the former is Mr. A. J. St. Clair, an ex-agent of the Shaw & Wilcox Silver-Saving Company, and the latter, Mr. D. H. Cross, of emulsion-plate fame. Both active men.

Chicago Photographic Association.—At the next regular meeting of the Chicago Photographic Association, on Wednesday evening, April 6th, 1881, at 8 p.m., at No. 229 State Street, there will be an exhibition of gelatin negatives and prints from the same; also, a competitive trial of gelatin plates from various makers, which plates will be exposed previous to the meeting by a committee appointed for the purpose, and will be developed at the meeting by Messrs. G. N. Barnard and P. B. Greene, the former using ferrous-oxalate and the latter alkaline pyro.

All photographers, from any part of the country, whether members of the Association or not, are invited to be present, and to contribute negatives, prints, or plates.

F. H. Davies, *Secretary*,
No. 78 Michigan Avenue.

Mr. C. D. Mosher, Chicago, has been a sufferer by fire recently. On March 2d, fire was discovered in one of the workrooms, and before the firemen could extinguish it, every thing was destroyed in the operating, silvering, and toning-rooms. Everything is nicely under way, though, now. Mr. Mosher is not easily put back.

Mr. Willy Wallach, New York, writes us that we made some "small errors" in Messrs. Trapp & Munch's formulæ in our January "Our Picture" article, and asks us to correct as follows: Near the end of the same it reads, "This precaution is absolutely necessary with our highly albumenized-paper to prevent the albumen, especially on the lower side, *which always has a higher lustre*," etc. They wish it to be stated that this higher lustre is only to be found on their single albumen-paper, not on the double, on which the second coating is put on in the opposite direction, and therefore equalizes the lustre on all sides. Also, "the remedy for blistering you state, *one pound of salt to one pound of water*, which is incorrect. The right proportion is 1:10."

Mr. A. M. Brown, for nearly nine years foreman for Mr. D. Hovey, has organized the "Peerless" Albumen Paper Works at Rochester, N. Y., and is the manager. He says, in his circular, "All persons who wish a paper that will work alike every time, should get the *Peerless*." We can, probably, show our readers a print upon it presently. See advertisement.

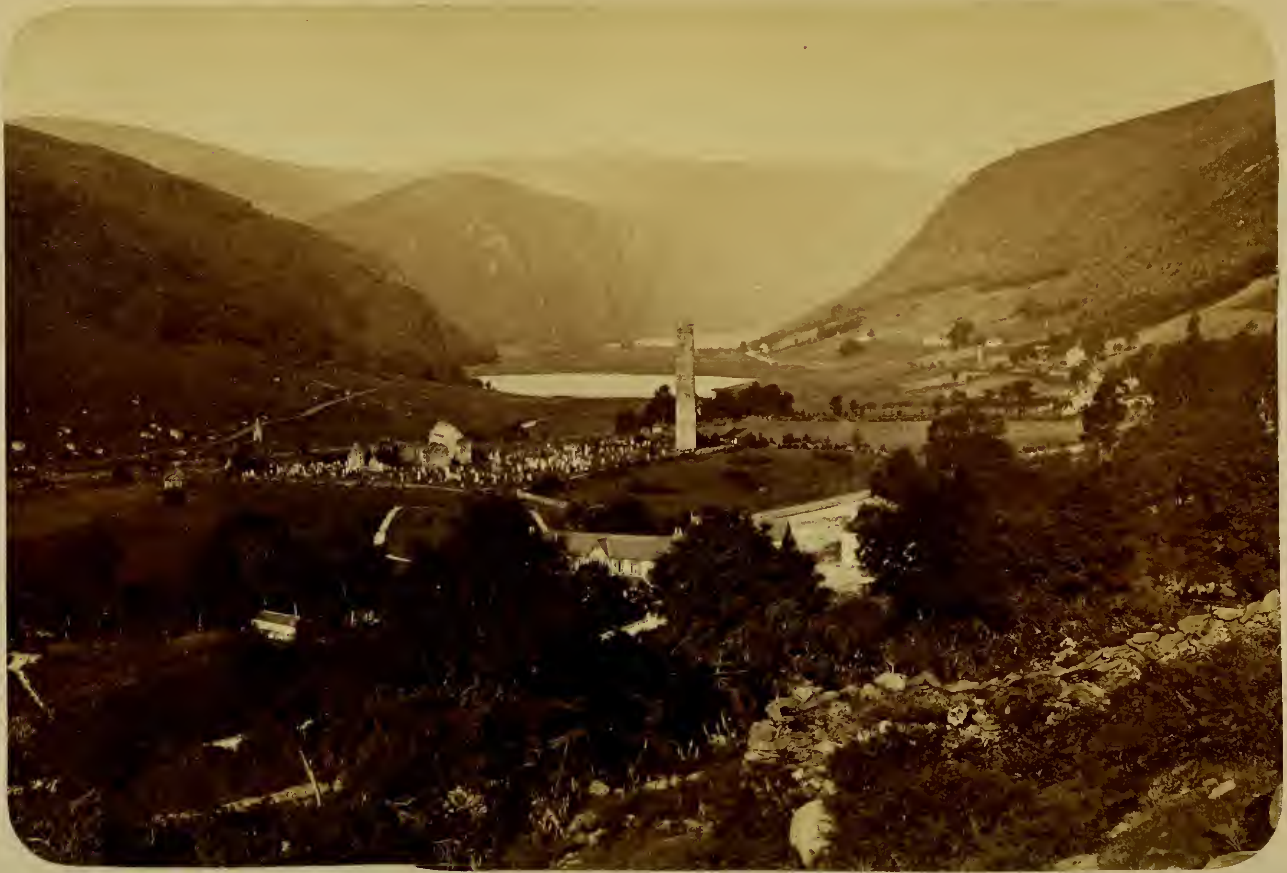
Portfolios for collecting, preserving, and transporting your exhibition of photographs to the coming Convention are supplied of every size, from 8 x 10 to 22 x 28, at low prices, by Messrs. Douglass, Thompson & Co., Chicago. This is enterprise.

Wilson's Photographics.—This is the title we have manufactured for our new work on photography. It is now nearly all in type, and we hope to have it ready next month. We announce its contents in the advertising pages, with particulars, and hope it will prove acceptable. We have done our best to make it not only a *beautiful* book as a book, but a very useful one to every photographer, poser, printer, artist, all who practise in that line.

Mr. Andrew H. Baldwin, the old and well-known stock-dealer of New York, died on March 11th. Mr. George Murphy, 9 West Fourth Street, New York, has undertaken to fill Mr. Baldwin's orders.

Items of News.—We learn with much regret of the late misfortune which has befallen one of our subscribers, Mr. W. H. Kibbe, Johnstown, N. Y. This gentleman has been burned out, totally and completely. We have not yet heard whether or not Mr. Kibbe had his place insured. The frequency of fires in photographic galleries should warn every photographer to invest a few dollars in securing himself against such calamities. The *Dry Goods Journal*, New York, gives over a column of its pages to a description of the large and busy establishment of Messrs. Lewis Pattberg & Bros., 709 Broadway, New York. Mr. Theo. Lilienthal, New Orleans, La., has recently fitted up and moved into his elegant new establishment on Canal Street. The *New Orleans Price Current* gives him a lengthy and flattering notice, the description occupying fully a column. We have received from the publishers, Messrs. Rowell & Hickcox, Vineland, N. J., the March number of *The American Short-hand Writer.* A monthly journal devoted to the art of phonography, and giving liberal instructions each month for the benefit of those desiring to perfect themselves in this branch. Messrs. Chas. Cooper & Co., 194 Worth Street, New York, send us their usual monthly price list. In addition to this list they send a circular calling attention to their acetic acid, and the new method of shipment, viz., in small barrels, thus saving the risk of breakage always attendant upon shipping carboys. Messrs. Douglass, Thompson & Co., the enterprising stock-dealers of Chicago, have lately issued a unique-looking book circular, giving names and prices of all English and American periodicals and text-books published in the interests of photography. This long list is but another proof of the upward growth of photography as an art and a science. The *Photographers' Bureau of Information*, for March, is also received from the above-named gentlemen. This little leaflet will be sent by the publishers free to all, each month, on receipt of your name and address. It is worth having; try it. Colored price-lists of mats and frames also received from Messrs. Douglass, Thompson & Co. We are in receipt of a copy of *The Illustrated Scientific News*, published by Munn & Co., New York. Like every other publication issued by this house, this paper is gotten up in elegant style, and full of well-written articles on art, manufactures, and useful industries. Mr. H. A. Hyatt, late of the firm of Gatchel & Hyatt, St. Louis, Mo., issues a circular announcing his removal to his large and commodious warerooms, at 411 N. Fourth Street, St. Louis. This removal is the outgrowth of an increase in business, which increase demands a larger stock than Mr. Hyatt could well accommodate in his old quarters. We wish him continued success. We have received a copy of the *British Journal of Photography Almanac* and *Photographic News Year-Book*, neatly bound in black cloth, from the Scovill Manufacturing Co., New York. For placing in the library, this cloth binding greatly enhances the value of the book, making it a really handsome volume. We all owe a debt of thanks to this enterprising house for having placed these two most useful books within the reach of all, and we trust their success has been sufficient to warrant them in carrying out the same plan next year. If you have not already secured a copy, delay no longer. Only a few more left. We would call attention to the advertisement of an old and well-known paper manufacturer, John R. Clemons, Philadelphia. It will be seen that Mr. Clemons offers a reduction in price on some brands of his paper, and that he also claims to have made marked improvement in its manufacture. We hope soon to be able to test this, and place the result before our readers in an illustration for our magazine.

Keep the Babies still, by using Messrs. Peck & Snyder's Singing Bird, advertised in our issue further on. It is a perfect success, and will do all they claim for it. Read the advertisement.



W. LAWRENCE. DUBLIN.

"A BIT OF OLD IRELAND."

Boston Public Library.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. MAY, 1881. No. 209.

WILSON'S PHOTOGRAPHICS.

We were a little premature in announcing in our last issue that *Photographics* was *ready* for the reader. It *would* have been at that time, were it not that we concluded to make it larger; so that now the finished work covers, with index, 352 pages. A complete list of what it contains is given in the advertising pages, for which we beg the favor of a careful reading.

It has been our ambition to prepare such a book as this for the help of our fellow-workers in photography, for a number of years, but the work seemed too responsible a one to undertake. We hope we have not presumed in doing it now.

In Lesson A we have indulged in our special hobby, the *art* culture of photographers to the extent of some sixty or seventy pages. We then take up the harder practice of the art, and try to cover every useful point in the matter of the production of sun-pictures. The chemicals and their combinations; the instruments and apparatus necessary; planning and constructing, and working under the skylight; manipulation of the chemicals; posing and lighting; printing of all kinds; mounting and finishing, and retouching the negative, are all thoroughly treated. Then we follow with all the latest information and formulæ concerning the bromo-gelatin emulsion process; Dr. Vogel's emulsion; the phototype process (similar to the "artotype"); the platinotype printing process; the collodion transfer, or "Megatype" process; the solar negative retouching method; "lightning," or "quick" process in number, and a quantity of others, for which large sums of money have been obtained from photographers.

There are about one hundred illustrations; two full-page photo-engravings of examples in composition; a phototype of eleven positions of the famed and graceful elocutionist, Miss Adelaide Detchon, and a phototype of the author by Mr. F. Gutekunst, Philadelphia.

A copious index is added, a table of contents, and a list of the illustrations. Our binder and printer have done their very best to make the work a handsome one, and we sincerely hope it may meet with a liberal acceptance by the trade, and prove exceedingly useful for a long time to come.

Please read the announcement in the advertising pages.

NOTES AND PRACTICAL SUGGESTIONS.

BY A. M. DE SILVA.

(Continued from page 69.)

Some years ago a correspondent to one of the journals asked, "what has become of the old lenses?" and jokingly suggested that they be collected, and the brass mountings cast into a statue to the memory of Daguerreo. He was certainly not alone in his cogitations, for who does not often ask himself or his neighbor the same query?

Messrs. Benjamin French & Co., of Boston, tell me they have sold during their career nearly 40,000 lenses, small and large, of Voigtlander, and Darlot, and his predecessor, Jamin's, make; add to this those sold by the many stock-houses of Ross, Dallmeyer, Steinheil, Hermagis, and Derogy (all made in Europe) and Harrison, Usener, Zentmayer, and Morrison (made here), beside the hundreds upon hundreds of foreign-made lenses, upon which is engraven the names of the dealers who sell them, and we must have a most astonishing amount.

The photographer all the world over claims that he is "taxed" most heavily on everything; certainly, in the matter of foreign lenses that item has not been forgotten, the customs duties in this country being no less than forty-five per cent. The revision of import dues has been warmly advocated and discussed for months past, and in view of this, should not the fraternity take this matter into consideration in justice to themselves? Were the tariff more reasonable, it would also benefit the dealers, who, being able to sell the lenses for less prices and at the same profit as now, would dispose of more, and they would surely give their aid to the movement.

Import duties are levied for two reasons: one as a means to support the government directly, the other to "protect" trade, *i. e.*, to develop the industries of the country. Does the excessive duty on photographic objectives contribute to the former without doing greater injury to other industries? has it done anything extraordinary towards developing the manufacture of photographic lenses in this country? It is true that excellent instruments have been and continue to be made here: but, *comparatively*, the trade is insignificant. Beside, the manufacture of lenses is *not* "protected;" on the contrary, it is *hampered* by "protection for the makers of optical glass." Where are *they?* If they were here in this country, it might be well enough (for them), but, unfortunately for the optician, they are "away across the sea," and every ounce of optical glass comes in not only for its share of heavy duty and freight and insurance, but also a liability to be found defective when it reaches certain stages in the optician's work-shop. In this particular the English opticians possess a great advantage over others; having the manufactory of their glass within easy distance, if anything is wrong in it, by paying a comparatively higher price—an insured rate, as it were—they have the privilege of returning it.

It is claimed that luxuries should be taxed, and heavily, too. Pictures in a measure come under that head; but they are something more, they are refining—enjoyable to the poor as well as those having better-lined purses; they are so useful that they have become *necessities which we cannot possibly do without*, and as soon as they become this, they cease to be absolute "luxuries," and their production should in no way be embarrassed.

In several frames of pictures of the principal actors in a travelling company which were recently exhibited here was something so remarkable that I make a note of it. *In the same frames* were placed *original* photographs over the name "Sarony," and *copies* from them over that of "Ross." It struck me forcibly that, in view of the barefaced piracy now carried on to such an extent in "celebrities" and popular photographic works which have cost the author so much to obtain, this would be one capital way to bring the matter fairly before the public, and help discourage them from buying a poorer copy when a much better original may be obtained for a few cents more.

(To be continued.)

HOME-MADE GELATINO-BROMIDE DRY-PLATES.

No. 3.

BY JAY DENSMORE.

(Continued from page 120.)

After the plates are thoroughly dry, they may be taken out of the box, and packed together in pairs, film sides together, and putting about six in a package, wrap them all up carefully in black paper, lay in tight boxes, and place in a dark, dry place, until wanted for use. It is best to keep the plates of different batches separate, as it will sometimes occur that there will be considerable difference in rapidity, and other working qualities, between the plates of different batches even when pains have been taken to prepare them exactly alike. I, however, have experienced very little difficulty from this source. When a new batch is dry, they should be tried to ascertain their quality, and before beginning, the camera, dark-slide, etc., etc., should be carefully examined, and all apertures that can possibly admit actinic light should be thoroughly closed. A camera may work wet plates satisfactorily and badly fog dry ones, and too much care cannot be exercised in this direction. The door in the back of the dark-slide, the shutter, and the front and tube will generally need considerable tinkering. If there is the least doubt about all of these places being absolutely light-tight, take the precaution to keep them covered, while the plate is in the slide, with the focusing or some other black cloth.

There are two methods of developing gelatin plates in use, the alkaline and the iron, either of which will give good negatives when used understandingly with good plates. Each of the methods has its advocates, and there is considerable difference of opinion among gelatin workers as to which is the best. For myself I much prefer the iron method, as it gives cleaner, sharper, better negatives, is much more simple, reliable, uniform, rapid, and certain in its results, and is not in any other respect inferior to the alkaline method.

The manufacturers of ready made plates have special formulas for compounding developers for their plates, but they are all of them only modifications of these two methods. The February, 1881, number of the *Photographer* contained several of those formulæ in full, and as any of them will work with my plates if properly used, I will refer the reader to that number for a formula for developer, instead of unnecessarily taking the space for inserting a set of them here.

Whichever method of development the beginner may select, he must not be discouraged if his first efforts are not as successful as he would like. He must remember that all was not just as it should be with his first wet collodion negatives, and that practice is the only sure means of reaching perfection in anything. I am certain that the making and working of gelatin dry-plates is much simpler and easier than wet plates; yet the man who succeeds in mastering gelatin, as applied to the photographic negative, has got considerable to do, and he will not get through it in a day. However much he may learn from published formulas, and the experience of others, in magazine form, he must, nevertheless, find out the greater part of it himself by experiment and practice.

I have in previous articles given my ideas as to some of the disadvantages which the gelatin dry process possesses when compared with the old stand-by wet collodion, and I will next month say something of its advantages.

ANXIETY ABOUT ALUM.

Alum has been re-recommended recently by some of our foreign co-workers, with a good deal of gusto and self-congratulation, as that long sought for and now newly-discovered wily chemical which may so insinuate itself as to ferret and drive out, eliminate, every trace of hyposulphite in the afflicted photographic film or figment thereof. Especially has it been recommended for use in the bromo-gelatin emulsion process for cleansing the plates after fixation.

This is all very good and commendable, and it is well for us all to look back and review our blessings when we are disposed to grumble and growl over *what is.* Our love of order, however, induces us to yield to the request of several of our friendly patrons—to say nought of our esteem for them—to "put things where they belong," by reminding the world that the credit of this useful alum subterfuge is due to our own countryman, Mr. John R. Clemons, the well-known experimentalist and manufacturer of albumen paper of our city.

Those who had the happiness to be present at our National Convention in Chicago, in 1874, after the fire-king had endeavored to frighten us out, will remember with what coolness and modesty Mr. Clemons got up on a chair, and announced the discovery which he had long ago made of the unsuspected virtue of alum, and which he had held as his own discovery until he had first tested it, and with what enthusiasm his announcement was received, especially when he scattered the prints that had served as his tests for years, white and clean, among his audience. And if our foreign re-discoverers will refer to the *British Journal* of September 18th, 1874, they will find a record of Mr. Clemons' announcement on page 445; and in the following issue of the same journal the editor combats Mr. Clemons' ideas. But it seems as though the readers of that goodly weekly do not now agree, but side with Mr. Clemons in believing alum to be a good eliminator of hypo the destroyer. Now let the alum alarm end, and try alum.

LOW PRICES—LOWER AND LOWER.

The Greatest Outrage yet on Photography.

Fifty dollars reward to any one who can beat this—One dozen cabinet portraits, finest finish and quality, at one of the finest galleries in the city, for two dollars. For particulars, address "Superior Finish," box 2335, Boston. Save this advertisement.

Dear Sir: The above reward I cut out of the Boston *Sunday Herald*, last, and send it to you, thinking you would like to know how some of our photographers are trying to create an excitement among photographers by offering the above reward, and, knowing your desire to handle such people in your gentle way, take the liberty to send it to you, with the request that you have something to say about it in your valuable *Philadelphia Photographer*, and oblige

Respectfully yours,
W. H. B.

This constant cutting down of prices is one of the difficult problems that photography has to grapple with at present.

The advertisement above shows that the party who agrees to make cabinet photographs at such a dishonest figure, is utterly ashamed of his offer or to be known. The reason of this is apparent; he will play his "cheap-John" game so long as he can get credit from his stock-dealer, and work secretly. He is doubtless well aware that no man can make cabinet photographs at two dollars a dozen, and pay his honest debts. Moreover, he does not make his offer over his own name because he knows he cannot give a good quality of work for the price, and he hopes to make a living upon the few gullible people whom he can inveigle into his disreputable den, and who will not find him when they come back for their pictures.

What we are all to do about such a tendency downward is hard to tell. It seems as though the only thing we *can* do is *to wait*, and the thing will cure itself. Keep up the quality of your work and your prices, and you will *make the most money* in the end, *sure*.

The gentlemen who will suffer the most by this two-dollar business, after he who has the impudence to call himself "Superior Finish," will be the "club photographers," who inaugurated the low-priced system themselves. And it is only right that the blow should fall hardest on their heads.

True, there is no doubt but every man "has a right to regulate his own prices," but then there is such a thing as shortsightedness, too.

LET US HAVE AN EXCHANGE CLUB.

I received the *Mosaics* you sent in due time, and I trust you will not accuse me of ingratitude for not having acknowledged it before. When it came it found me sick, and quite unable to write. Since getting up again I have had a world of work to do, so much, in fact, that it is only within a few days that I have found time to read the book. I have never heretofore had a very good opinion of them, and never indulged in their purchase, but if the ones I have allowed to go by have been as good as this one, I regret to have lost so much. If the quality is kept up to the standard of this one, you can depend on me each year for a customer.

A few months ago, some one (I do not now remember who) suggested in your journal the propriety of exchanging work among photographers, that each might see the progress others are making, and so they might be mutual helps. I have practised this among a few of my acquaintances for a number of years, and last fall I sent out several packages, probably twenty-five, or more, with request to exchange, but I found only four willing to send me work in return, or even with courtesy enough to return mine. Is it because they are ashamed of their work, or are they afraid they will help some one along who is too poor to attend conventions and exhibitions of photographs?

I would like to suggest that you try to organize a sort of Exchange Club of photographers who are willing to exchange one or two, or more, pictures a year with other members, under certain conditions; as, for instance, that no one should make pictures specially for this exchange, but should use their regular custom negatives, and that the exchange should be in cards and cabinets. I believe such an arrangement might be made to do good to all who enter into it. I have made photographs for fifteen years, and I have never seen even a small package of pictures, from "no matter who," in which I did not find something that I did not know before, and I believe all might learn. The expense would be light, and I am sure good would result. What do you think of it?

The twelve examples of Mr. Rocher in your last journal were very fine indeed, and I have no fault to find with them; but I hope you will pardon me for saying that they do not fill a want felt by a very large class of photographers. Not one in a hundred of our patrons could be got into such positions, even by Mr. Rocher himself, and if they were, they would condemn the proof. That is not what the majority of people who patronize our galleries want; but they do want some easy, natural position, suited to them, and that is just where we can all be helped by such an Exchange Club as I have suggested, where the pictures exchanged should be specimens of our common every-day practical work. Let us hear from you, craftsmen. What think you? J. S. Mason,

Medina, Ohio.

Wilson's *Photographics* will post you on modern photographic art and practice up to date. It is a book that no photographer would be without if he knew how comprehensive and practically valuable it is.

A FEW NOTIONS IN REGARD TO CHEMISTRY.

BY DR. J. H. WARRINGTON.

If a bar of iron under ordinary circumstances be warmed, it will, if careful measurements have been made before and after the operation, be found to have increased in size, but it is iron still, and is easily recognized as such. Let the same bar be hammered on an anvil, it may be beaten out quite thin, but it is iron still; it may be drawn out into a fine wire many thousand times its original length, but it is iron even now; it may be fused and poured into a mould of any shape which it will assume, but it will be still recognized as iron, although it will now be what is known as cast-iron; but in all of the manipulations above mentioned the result will be at once recognized as the one thing—*iron;* it has not lost its identity.

If, on the other hand, a piece of the original bar be placed in dilute sulphuric acid, a violent effervescence will at once take place, and the iron will gradually diminish and eventually disappear entirely; the previously colorless solution will have more or less of a greenish tinge, and if the liquid be evaporated, a mass of beautifully shaped crystals of a green color will form, and there will not be a trace of any resemblance to the original iron to be found. Here it has lost its identity, and the original is not recognizable in the result. Here, then, is a great difference at once apparent. Where, as first shown, the substance retains its identity, we apply the name physical changes, changes merely of mass. The science treating of these changes is called physics, and to the latter results, that is, where the substance loses its identity and is no longer immediately recognizable in the result, we give the name of chemical changes.

Physics includes astronomy, mechanics, electricity, sound, light, heat, etc., in general statics and dynamics or masses in a state of rest or in motion.

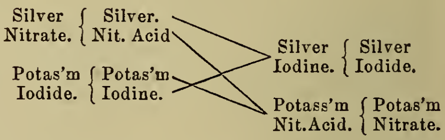
Every mass of any kind of matter, even if it be so small as to be discernible only by a powerful microscope, is composed of particles, which cannot be any further divided, called atoms. These atoms do not touch each other, but are separated by spaces, called interatomic spaces, and they are supposed to be in a state of constant motion. If from any cause the motion of these atoms be increased, an enlargement of the mass follows; if diminished, the size of the mass lessens. Two or more of these atoms may unite to form a molecule. Atoms of the same substance unite to form an increased mass of the same substance, and perfectly retain its identity and all properties belonging to it.

Atoms of different substances unite to form a *molecule* of a substance entirely different in its properties and utterly losing all identity of any of its components.

Thus we may draw the line between the two sciences—physics, the science of masses—chemistry, the science of atoms.

A compound consists of two or more substances, each one of which is composed of nothing but itself, and is therefore termed an element. Potassium iodide is a very familiar example, composed, as the name indicates, of one atom of potassium united to one atom of iodine. One atom of an element may unite with several atoms of another, but there is never any hap-hazard, but strictly in obedience to definite laws, and the composition of any compound always contains exactly the same elements and always in precisely the same proportions. For instance, as above given, exactly 39.1 grains, ounces, or pounds of potassium combine with exactly 127 grains, ounces, or pounds of iodine to form potassium iodide, and in like manner 112 grains of cadmium will combine with 254 grains of iodine to form cadmium iodide. Here the quantity of iodine is just double what it was in the first instance. With 56 parts of iron, 381 parts of iodine, or three times as much as with potassium. In the same way, taking a large number of compounds, we find that the iodine will always combine either in the proportion of 127 or some multiple of that amount, hence we say that 127 represents the atomic weight of iodine.

In the same way 39.1 is the atomic weight of potassium. Some substances unite to form a *compound radical*, that is, one which will play the part of an element in combining with another. Thus, three gases—hydrogen, nitrogen, and oxygen—will combine together to form what is commonly called nitric acid (or, as will be shown hereafter, should be called hydrogen nitrate), which consists of hydrogen 1 part, nitrogen 14 parts, and oxygen 48 parts; and as the combining weight of a compound is the sum of the combining weights of its elementary components, would give us as the combining weight of the molecule of nitric acid $1 + 14 + 48 = 63$. These 63 parts of hydrogen nitrate will combine with 108 parts of silver to form $62 + 108 = 170$ parts of silver nitrate, while one atom of hydrogen is liberated and passes off as a gas. (The exact mode of the reaction is too complex to be explained here, but will probably be more fully studied hereafter.) Now, how can we apply to practice the ideas here given? Suppose we wish to make some silver iodide, how would we do it? Add silver nitrate to potassium iodide, both in solution and colorless. Upon doing so we have a pale, yellow precipitate formed, and the colorless solution contains (supposing the proper proportions have been used) not potassium iodide or silver nitrate, but *potassium nitrate* (saltpetre), and the change has taken place thus, calling for convenience the compound radical, nitric acid,* which is not correct, but mustered in for the emergency, we may represent the reaction in this way.


Silver Nitrate. { Silver. Nit. Acid
Potas'm Iodide. { Potas'm. Iodine.
Silver Iodine. { Silver Iodide.
Potass'm Nit. Acid. { Potas'm Nitrate.

Again,

Atomic weight of Silver = ...	108
Atomic weight of Nitric Acid = . . .	62
Atomic weight Silver Nitrate, 108+62 =	170
Atomic weight of Potassium = ...	39.1
Atomic weight of Iodine = ...	127.
Atomic weight of Potassium Iodide, . .	166.1

How are we to use this valuable information?—*for all knowledge is valuable only as we can apply it to practice.* It will be seen from the above diagram that all the silver combines with all the iodine, and all the potassium with all the nitric acid, hence we find that 170 parts of silver nitrate will exactly combine with 166.1 parts of potassium iodide to form 274.1 parts silver iodide, and 101.1 parts potassium nitrate. Suppose we wished to know how much potassium bromide was required to convert a given quantity of silver nitrate into silver bromide: Take, as above, at. wt. of silver nitrate, 170; at. wt. potassium, 39.1; at. wt. bromine, $80 — 39.1 + 80 = 119.1 =$ at. wt. potassium bromide; hence, 119.1 parts pure potassium bromide will exactly convert 170 parts pure silver nitrate into 188 parts pure silver bromide, which will be precipitated because insoluble, and there will be 101.1 parts potassium nitrate remaining in solution. There are tables of the atomic weights of all the elements given in all the works on chemistry, which should be carefully studied and kept at hand for reference, but as there have been some errors detected a few years since, I would advise the student to examine the table and select one in which oxygen is given as 16 and not 8 as formerly; this will be a pretty safe criterion for the correctness of the entire table.

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* We will be better able to understand the true name after awhile, but for our present purpose we feel warranted in using this term.

NOMENCLATURE.

As the endless number of bodies existing throughout nature are composed of one or more of the limited number of elements now known, and perhaps a few more to be discovered, some system must be adopted in naming the compounds. The common names (those used in commerce and frequently derived from the mystifying expressions used by the alchemists) do not in the least aid us. As, for instance, green vitriol, white vitriol, blue vitriol, Glauber's salts, lunar caustic, and scores of others of the same character, give us no idea of their composition, a knowledge which is indispensable to our urgent needs. In order, therefore, to give a practical shape to this naming or nomenclature, as it is termed, the composition of the substance is given, or at least sufficient of its elements are introduced to explain its constitution. Thus, taking the ambiguous names above cited, we have the much better expressions, for green vitriol, iron sulphate; for white vitriol, zinc sulphate; blue vitriol, copper sulphate; Glauber's salts, sodium sulphate; lunar caustic, silver nitrate. Again, as will be explained further on, the atoms of some elements have the ability to combine with one, two, or more atoms of another, to form molecules of different compounds. Thus we have one atom of iron combining with one atom of oxygen, and two atoms of iron combining with three atoms of oxygen, forming in each case a molecule which very much differs from the other. In such a case as this, we must be able to distinctly identify the one meant, and we have recourse to a simple means which will admit of no misunderstanding. The Latin name for iron is *ferrum* (hence ferrule), and we simply call the compound of one atom of each, in this case, *ferrous-oxide*, while in the other we have *ferric-oxide*. *Notice*, the terminal *ous* signifies a lower and *ic* a higher amount of the other element, oxygen. In the same way we have ferrous and ferric iodide; ferrous and ferric chloride. A glance at these names would show that to write out any number, even though it be small, would consume considerable time and space, and, as this is the day of rapid movements, quick exposures, and accomplishing very much in a little time, we must abbreviate this space-requiring, time-consuming method, and make it condensed. Alongside of the table of atomic weights above referred to, you will find a column of letters, some single and some double, which are called symbols, and here, I might say, we approach the key to some of the mysteries of chemical expression.

Take, as above, ferrous-sulphate, its components are iron, sulphur, and oxygen—true, we might write it iron, 1; sulphur, 32; oxygen, 64, but this takes space and time. On the line with iron in the symbol column you will find Fe; opposite sulphur, S, and likewise oxygen, O. We will write these in the order given, FeSO, which truly tells us the elements of which it is composed, but not in this case, at least, the relative proportions of each. Ferrous-sulphate has one atom each of iron and sulphur, and four atoms of oxygen in its composition, so we will write it $FeSO_4$, the symbols not only show the elements but the value of the whole compound. Substitute for each its atomic value, and you have Fe = 56, S = 32, 4 O = 16 × 4 = 64, hence $FeSO_4 = 152$, the atomic weight of one molecule of pure anhydrous (without water of crystallization—*vide post*) ferrous sulphate. A symbol alone represents its atomic weight = Fe = 56, but if any multiple is intended, it is placed as in O_4 below and to the right. Where it is desired to express a multiple of the whole compound, or in case of a compound radical, it is written $2\ FeSO_4$, or $(FeSO_4)_2$.

(To be continued.)

A GROWL.

BY R. E. WOOD.

THE February number of the *Philadelphia Photographer* was none too full of emulsion, but we want, and must have, an American instead of an English formula. I have been waiting a long time for what I should consider the practicable method, and hope it may be published soon. One of your correspondents, C. F. Richardson, promised to give the readers of the *Philadelphia Photographer* the required formula, even to the using of common glue without trouble; but I suppose he has found it pays better to retain this knowledge and sell the prepared plates. Can't blame him very much, but still it is rather rough on us readers to get a promise and not have it fulfilled. Many would probably fail, even with the method that would use American chemicals obtainable by all, but still we want to try. As for Hopkins & Williams' chemicals, they are unobtainable by most of us, and if there is any difference we should know it before using valuable time in experimenting, and, probably, to be disgusted, so as to give up the undertaking altogether.

Then another bother is that twenty-ounce glass bottle that is to be heated and cooled so often; the chances are, that nine times out of ten it would go to pieces, and suddenly *complete* that lot of emulsion. A granite, iron, or other suitable vessel must be substituted for this. I believe that Rosengarten & Sons' chemicals, or Magee's, are all that are necessary in that line; but we want to find some gluemaker who has pure water and other things proper for the production of a pure article, and then we can go ahead with some assurance of success. "Eblana" admits that Nelson's gelatin is not all the same, hence the more need of having it here at home, where we can more fully impress the manufacturer with the idea that it *must* be alike.

"Eblana" errs in saying that nitrate of silver should carry acid to be good. I generally make my own, and always leave an excess of silver in the solution of acid and water, and leave it long enough so as to make sure the acid is all combined; and it is good nitrate. Let us have the very best and most exhaustive formula, and the simplest, then we will go after emulsion, and, probably, succeed. [We think Mr. Densmore will content our correspondent. If not, *Wilson's Photographics* will further enlighten him.—ED.]

SOCIETY GOSSIP.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—A regular meeting was held at Douglass, Thompson & Co.'s warehouse, 229 and 231 State Street, on Wednesday evening, April 6th, 1881. Mr. Alfred Hall, President, in the chair. Meeting called to order at 8 o'clock. About one hundred members and others were present.

Messrs. George L. Young and W. H. Hilton, of Chicago, were elected members.

The chairman, in introducing the subject for the evening, alluded to the fact that thirty-three years ago this present month he commenced to learn the daguerrotype business; that, as his audience doubtless knew, was a "dry process." No stained fingers; in fact, a very clean and agreeable process to work. But it soon became evident that, from its slowness and other reasons, it was unequal to the increasing demands made on photography, as the new and beautiful process became more widely known, and in continually increasing demand. The first change was the introduction of the once universal, but now almost forgotten, ambrotype; a great step in popularizing the art. He recalled these circumstances because he observed to-day the same reluctance amongst old collodion workers to adopt the dry-plate, that was long ago exhibited by the old daguerrotypers to adopt the ambrotype; as a consequence of this reluctance, many of them allowed their business to be taken away from them by new men, whose first acquaintance with photography dated after the introduction of the popular ambrotype, and who had never made a daguerrotype. These facts he recalled to the attention of his hearers as a warning. One would suppose they would only be too glad to adopt the gelatin plate, with its greatly increased rapidity, cleanliness, convenience, and absence of worry about silver baths, etc. But it seems to be otherwise; and he hoped, therefore, they would take to heart the lesson inculcated by his reminiscences, or they would surely be left behind in the race by their more enterprising brethren who work gelatin.

In the old days to which he had referred, the photographer had scarcely any of the advantages he possesses now; there were few publications treating of the art-science, no societies; few liberal-minded men to give him freely the benefit of their experience, often obtained at serious labor and cost to themselves; if he wanted any information he had to pay liberally for it, and often found it worthless when so obtained.

A man who knew, or thought he knew, a little more than his fellows, was very careful to guard against having his superior knowledge stolen from him; and he (the speaker) was sorry to say there were still some of that stamp in the profession, but they did not belong to societies or attend meetings. Oh, no! that would be too risky; in an unguarded moment they might disclose their secrets! But happily they formed a very small minority.

Now the photographer was very differently situated. He had an extensive and very excellent periodical literature, and any quantity of books to help him. Societies like this existed in nearly every large city, and men of high scientific attainments and vast practical experience gave him freely the benefit of their knowledge. Therefore, he had no one to blame but himself, if he lagged behind in the march of improvement.

As there was much to do this evening, the speaker would not take up any more of the time of the meeting, but would introduce to them a veteran in the profession, and a pioneer in dry-plate work, Mr. P. B. Greene.

Mr. Greene then spoke as follows: I wish to call your attention to the variations in the amounts of pyro, ammonia, and bromide to the ounce of developer as poured on the plate, in the various published formulæ for alkaline development.

The first formula I will take is that given by Mr. Mawdsley in 1874, and to be found on page 28 of the *British Journal Almanac* for 1880. The plate is first soaked five minutes in a two and a half grain bromide of potassium solution, then immersed in a solution containing four grains pyro and two and a quarter drops ammonia to the ounce.

The next you will find on page 47 of the same book, Mr. H. Mansfield's formula. It contains in each ounce of developer one grain pyro and four to six drops ammonium, with one-third grain bromide ammonium. Here you see one-fourth the amount of pyro contained in the first, and double the ammonia.

The next formula I will notice can be found on page 69 of the *British Journal Almanac*, 1881. It is the now well-known "Edwards' Glycerin Developer," and the most popular formula in use. It contains:

Pyro, ...	1⅞ grains.
Ammonia, ...	1⅞ drops.
Bromide of Potassium, .	½ grain.
Glycerin, ...	1⅞ drops.

Being intermediate between the other two as to the amount of pyro, and containing less ammonia than either. Next, I take Nelson's as given by Dr. Vogel:

Pyro, ...	2 grains.
Ammonia, ...	7⅙ drops.
Bromide of Ammonium, .	1½ grains.
Sugar, ...	3 "

Nearly the same amount of pyro as Edwards', but almost four times the ammonia. Now Carbutt's:

Pyro, ...	1⅓ grains.
Bromide of Potassium, .	1 grain.
Ammonia, ...	4 drops.
Glycerin, ...	4 "

Cramer and Norden's:

Pyro, ...	1½ grains.
Bromide, ...	⅜ grain.
Ammonia, ...	2 drops.

Eastman's:

Pyro,	3 grains.
Ammonia,	½ to 1 drop.
Bromide,	⅛ to ¼ grain.

This is relatively very strong in pyro, and very weak in ammonia. Nelson's developer, as published in the *British Journal Almanac*, 1881, differs slightly from that given by Dr. Vogel above. He uses to the ounce of solution,

Pyro,	2 grains.
Bromide,	2 "
Ammonia,	13 drops.
Sugar,	3 grains.

Here you will find an excessive amount of ammonia, and a corresponding amount of bromide to counteract it—the object of which arrangement is not very easy to see.

Now, in all these formulæ, there is one very important ingredient—the most important—omitted, viz., brains; and in my judgment the more of that ingredient you use the better. You must vary your pyro, ammonia, and bromide to suit the circumstances of each negative according to the subject, the lighting, the exposure, whether over or under, etc. And I cannot do better than close my remarks by reading an article by Andrew Pringle, in the *Year-Book* for 1881, which tells the story much better than any words of mine could do. (Mr. G. here read "General remarks on the development of gelatin plates," by Andrew Pringle, page 69 of the *Year-Book*, 1881.)

The President.—It is with great pleasure I now introduce to you one of the oldest names in the history of photography in America—that of a gentleman formerly one of our most respected members, and who, on leaving us to go to a sunnier clime, some eight years ago, received the distinction of being made an honorary member—Mr. G. M. Barnard, late of Rochester, N. Y.

Mr. Barnard.—I am not much of a speech-maker, but there are a few things I would like to say. I was present at your last meeting, and observed with great pleasure the interest manifested in the great questions of the day, and the progressive spirit displayed. The Chicago Photographic Association has evidently not retrograded since those old days to which your President has just referred in a manner so complimentary to myself. Since then I have visited most of the galleries, and find nearly all the Chicago photographers interested in the "new departure." Your President has just called your attention to some matters of history connected with the old daguerrotype process, and its gradual but rapid disappearance in favor of the ambrotype. I wish he had carried that history a little farther, and related the troubles encountered by the early workers in wet collodion (negative). Probably few present recollect the difficulties attending the introduction of that process. Complaints are frequently made of the difficulty of working gelatin, but they are less formidable than the difficulties of wet collodion when in its infancy. Considering the short time that gelatin has been before the public in a practical shape, it has made wonderful strides—certainly, it is much nearer perfection now than collodion was at the same age. Again, you frequently hear the objection made that results equal to first-rate wet-collodion work cannot be obtained with gelatin. I need only direct you to the specimens with which these walls are adorned for an answer to that. Just as good or better work can be done with gelatin as ever has been done with collodion, but of course a little time, patience, and brains are required. There is no royal road to photographic excellence, whatever process you work.

My principal object here, to-night, is to give you some practical instructions in development. Now, there are two methods in ordinary use, both of them capable of producing excellent results, and both of them liable to give poor ones unless intelligently used. As Mr. Greene has just told you, no ingredient you can put into your developer will take the place of brains. These methods are alkaline pyro and ferrous oxalate. With the former I have very little acquaintance, but it will be fully illustrated for you by Mr. Greene; for myself, I prefer ferrous oxalate as simpler and less troublesome, and it is that process I shall work before you to-night. It is, I think, being adopted by most of the old gelatin workers in this country and Europe. I believe that just as much latitude in exposure is allowable as with pyro, and you only have two chemicals to bother with, both of which, in solution, possess the most unlimited keeping qualities, and which you mix as you develop each plate.

There is one thing that beginners in gelatin work must remember, viz., that their dark-rooms, shields, cameras, etc., must be absolutely light-tight, and that the orange light, which answers for wet collodion, will inevitably fog a gelatin plate—indeed, even ruby light will do so, unless just the right color, and even then, with very sensitive plates, you must not have too much of it.

There are two grades of plates usually made, one about four or five times as rapid as wet collodion, the other ten times—this last being about the limit in commercial plates, although it does not by any means represent the greatest rapidity obtainable. But, as there is considerable work to get through to-night, I will not take up any more of your time. If any gentlemen would like to ask questions, I shall be happy to give them any information in my power.

Mr. Gentile.—Can you tell me the reason of plates looking green when developed with pyro?

Mr. Barnard.—No. I have never had any experience with that developer.

(Mr. Douglass here read Captain Abney's remarks on the subject of green fog; in his recently published work on gelatin.)

Mr. Hesler.—I have got rid of green fog by means of a two drops to the ounce solution of hydrochloric acid in water.

The President.—Chicago is honored in the possession of a photographer who has obtained a world-wide reputation for photographing children Many have wondered what could be the secret of his marvellous success in that line, many saying that he used some mysterious, jealously-guarded "lightning process;" but latterly it has been whispered abroad that he does it with gelatin. Perhaps Mr. Smith will condescend to enlighten the meeting on this point.

Mr. Joshua Smith.—I am overwhelmed by the undeserved prominence that has been given to my name in this introduction. In answer I will say, that although, since the 6th of January last, I have been working gelatin exclusively, making my own plates, of which I now have on hand a stock sufficient to last me through the hot weather; yet my greatest successes in photographing children were achieved by the collodion process. But, as gelatin is the topic for this evening, I will confine my remarks thereto. I have had some trouble with green fog, and have no doubt it is caused by ammonia; have succeeded in getting rid of it by substituting silicate of soda, with a little carbonate of ammonia, for that ingredient in the developer. With this developer there is no possibility of green fog, and the negatives are beautifully clear in the shadows—almost like ambrotypes; or, if they come up too thin, this may be corrected by adding more pyro. The green fog, by the way, may be removed by a saturated solution of citric acid with or without alum.

Mr. Drummond.—What is the cause of granularity in shadows of gelatin negatives?

Mr. Smith.—I think it results from imperfect washing of the emulsion, leaving nitrate, ammonia, or potash in solution. I may remark here that I find Malingkrodt's (St. Louis) pyro stronger than Scherings', which has usually been considered the standard in this country.

Mr. Smith here exhibited several samples of unwashed emulsion on glass which had been exposed to daylight, and represented different grades of sensitiveness. His object in calling the attention of the meeting to them was to show that the usual color-test was unreliable.

Mr. Beebe being called upon to give his experience, said that he could give the members no information which they could not obtain from any beginner who had used gelatin a month—that being about the extent of his experience therewith. He had commenced using the pyro development, but had little success with it, and was getting discouraged with the whole business, when Mr. Barnard happened in and showed him the mysteries of ferrous oxalate, since which time he had met with fair success. As to photographers making their own emulsion, it was all very well to experiment, and he intended to continue his own experiments, but so far his success might be judged from the fact that he had made sixteen batches of emulsion, and thrown them all down the sink. Now that pellicle was coming into the market, he believed the best thing for his colleagues to do would be to buy their emulsion in that form, and coat their own plates, which could be done at a cost of about $1.25 per dozen, (did not say what size, presumably 5 x 8.)

The President next introduced the veteran Hesler, who remarked that his experience had been very similar to Mr. Beebe's. A year ago last November he tried his first batch of gelatin plates, Carbutt's, but had no success. This he at the time attributed to his own ignorance, but had since come to the conclusion that the plates themselves were also partly to blame for it. He had yet to see as good results in printing qualities from any gelatin plate as could be obtained from the very best wet collodion work; not the average run of collodion, but the finest results the process was capable of, he meant. But he thought a great improvement would come as more experience was gained in the use of the new material. So far, his own experience had been practically confined to pyro. He had tried the neutral oxalate, but without success. He had been using dry plates regularly for the last two months. Thought that before they came into general use photographers must make their own. Commercial plates cost too much. He had worked out a formula for his own use from the various published articles on the subject, which he should be pleased to give to any one who desired it. Mr. Edgeworth, on the contrary, did not think photographers had better make their own plates, but should select some reliable commercial make, preferably those of some manufacturer who only made one grade of plate (as he thought there was less chance of varieties in quality in that case), and stick to one brand until thoroughly familiar with it. For himself, he had tried most of the plates in the market, except Eastman's, but so far the Cramer & Norden's had given him better satisfaction than any others.

The President here stated that Messrs. Greene and Barnard would proceed at once to demonstrate the practical working of pyro and oxalate development respectively, and while they were making their preparations the members might profitably examine the fine collection of prints on the walls, and the negatives from which some of those prints were made, and for the exhibition of which Mr. Douglass had very kindly provided an ingenious transparency frame, allowing them to be examined simultaneously by both reflected and transmitted light.

A few minutes being thus occupied, and much admiration expressed for some of the fine results exhibited (which were from various parts of the country, although, as might have been expected, Chicago carried off the lion's share), and especially for some landscapes and interiors, by Messrs. Greene and Edgeworth, made on Carbutt and Cramer & Norden plates respectively, the gentlemen in charge of the development exhibition announced their readiness, and, the lights being turned down, operations commenced, and for the next forty minutes or more the meeting presented the appearance of a "dark seance" at a spirit medium's entertainment.

Mr. Barnard explained that his formula was one part of a saturated solution protosulphate of iron to seven parts saturated solution neutral oxalate of potash, adding a small and variable quantity of bromide, and diluting with water to suit the exigencies of the case. In this way he could correct a considerable error of exposure. A number of plates were developed, some of which, however, fogged, probably from some stray white light that found its way into the room, but was abolished when discovered. The operation was watched with much interest by those who could get near enough to see, but a large number, who were unable to do so, became a little impatient, and it was deemed advisable to terminate the development episode, the more so as it was getting late. Mr. Greene stated that at the next meeting he would continue his remarks on variations in proportions of ingredients in the alkaline pyro development, having cut them somewhat short to-night in consideration of the amount of business before the meeting, and that he would, at the same time, exhibit prints showing the result of these variations.

Mr. Gentile having remarked that the oxalate developer should be occasionally tested for acidity, or the reverse, as it worked best when slightly acid, Mr. Barnard stated that he always keeps a piece of litmus-paper in his solution for that purpose. The gas being relighted. the chairman said twelve Eureka 4-4 plates had been placed at the society's disposal for testing, and he would, if the members approved, appoint Messrs. Gentile, Rocher, and Edgeworth a committee to take charge of them and report at the next meeting. Carried.

Mr. Gentile moved a vote of thanks to the gentlemen who have so kindly instructed us this evening. Carried.

Mr. J. A. Anderson exhibited a new shutter, which can be operated from any part of the room, and the exposure regulated from a fraction of a second to several minutes, if desired. In principle it consists of a wire working within a flexible tube, said tube being composed of a coil of wire wound so tight as to be water-tight, and covered with silk, cotton, or other textile material. It is operated by pressing together two handles, held in one hand, and on releasing them the shutter is instantly closed by a coiled spring, which, with the shutter itself, is inside the camera-box, out of sight and out of the way. The shutter opens in the centre on two vertical hinges, like a folding door, and does not interfere with changing the camera front in order to use another lens. It was much admired by those present, its simplicity, durability, and unliability to get out of order being considered to recommend it above any shutter now in the market, while in cost it compared favorably with the cheapest of them. Mr. Anderson said that it was selling like "hot cakes;" one agent having taken thirty-four orders in one day. It has been adopted by Mr. Rocher, Mr. Joshua Smith, Mr. Kraft, and other prominent photographers here. Mr. Smith stated that he had at his gallery about seven or eight different mechanical shutters, and he considered this by far the best of them.

On motion, adjourned to the first Wednesday in May.

F. H. Davies,
Secretary.

Boston Photographic Association.—The April meeting of the Association was held on Wednesday evening, the 6th, at the studio of the Vice-President, D. T. Burrell, of Brockton. The photographers met at the Old Colony depot, and took the six o'clock train, arriving at Brockton a little before seven.

At the studio, the President called the meeting to order, and the last meeting's record was read and accepted. A vote of thanks was given Messrs. E. & H. T. Anthony & Co. for the numbers of the *Bulletin* received by the society. Mr. E. J. Partridge was made a member of the Association. The subject, "Photographing under difficulties outside the gallery," was then discussed, and Mr. Burrell described his method of photographing dead bodies, etc., presenting several new and novel ideas; other members gave their experience in similar work. The method of making statuary photography (by the posing of a lady model) was illustrated by Mr. Burrell. A great variety of backgrounds, set pieces, and other accessories was shown and explained by the host.

About nine o'clock the visitors were invited to his residence, where a bountiful collation was served in photographic style with dishes from the laboratory, "dry plates" were developed and "wet ones" exposed. There were many expressions of astonishment at the evident enterprise and progress shown by the Brockton artist.

The meeting adjourned in time to take the ten o'clock train for Boston, and meet next month at the studio of the Secretary at Boston Highlands.

W. H. Partridge,
Secretary.

Association of Operative Photographers of New York.—The new officers of the Association elected at the last meeting were installed. The President, Mr. Walker, being absent, the Vice-President, Mr. Coonley, took the chair.

The latest issues of the London *Photographic News*, *Philadelphia Photographer*, and Anthony's *Bulletin* were received with the thanks of the Association.

The late Secretary, Mr. Atwood, presented his annual report, according to which the

Association is in a flourishing state. Its moral and financial condition is unexceptionable. Numerically they stand only second of all photographers' societies of the country. A nice little library obtained by the generosity of friends, the discussions of photographic and scientific subjects, and the assistance of non-members, have resulted in the present satisfactory condition.

After all routine business had been disposed of, the proposed subject, "On improving the tones of ferrotypes or collodion positives," came to discussion. Of visitors, Mr. Taylor and Mr. Duchochois; of members, the Messrs. Slattenbeck, Coonley, Kane, and others, participated. It was generally agreed that Spitter and Crook's developer gave the most satisfactory results. According to Mr. Duchochois, its formula is as follows:

Water, ...	1 ounce.
Sulphate of Iron, . .	30 grains.
Bisulphate of Potash, .	10 "
Acetic Acid, . . .	2 drops.
Alcohol, ...	9 s.[*]

Make the collodion with gun-cotton, giving a tough film, to one ounce of which add twenty drops of methylated alcohol. The proper time of exposure and careful developing are of course a condition to obtain good results. The substitution of nitrate of potash or sulphate of magnesia for bisulphate of potash, the addition of nitric acid, or the addition of bromide ether to the collodion, was also recommended. Mr. Kane found a trace of tannin in the ordinary developer of great benefit.

Mr. Taylor said the sparkling metallic lustre resembling the appearance of the daguerrotype, that results from the use of nitric acid, is frequently objected to. He has obtained mat white and brilliant tones with bichloride of mercury (atabastorim), and vouches for the stability of such pictures, he having kept them for twenty-five years without any observable change or deterioration.

Mr. Duchochois objects to the use of mercury either in positives or negatives, as the deposit formed is subchloride of mercury (calomel), which by the exposure of light is decomposed into its elements.

Meeting adjourned to April 20th.

Charles Ehrmann,
Secretary.

Photographic Society of Philadelphia.—The stated meeting of the Society was held at their room, No. 520 Walnut Street, on April 6th, 1881, the President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read and approved.

The Secretary reported that the Scovill Manufacturing Company had presented the Society with a bound copy of the *British Journal Almanac*, and the *Year-Book of Photography*. On motion a vote of thanks was tendered that Company for their valuable gift.

On motion of Mr. Hewitt, the Room Committee was instructed to have a photogravure of the late Fox Talbot suitably framed and hung in the Society's room.

Mr. Barrington, of the Excursion Committee, reported that he had the choice of two routes, one by tug-boat up the Hudson River, and the other by boat on the Delaware and Hudson Canal. After a general discussion, it was decided that the former would be the pleasanter and afford more picturesque scenery.

Under a suspension of the rules, Mr. George Rau and Mr. John R. McLaughlan were elected corresponding members, as a qualification to their joining the Exchange Club.

Dr. Herbert M. Howe was proposed for membership by Mr. Corlies.

Mr. Fox called the attention of the members to the new double dark-slide recently patented and manufactured by the Scovill Manufacturing Company, of New York, and stated that a double holder, identical in principle, had been designed and used by Mr. D. A. Partridge, late Secretary of this Society, as far back as 1871.

On motion the Secretary was instructed to prepare for publication in the *Philadelphia Photographer*, and the *British Journal of Photography*, a letter setting forth the claims of Mr. Partridge as the inventor of the improved double holder.

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[*] Martin's *Manual*, Vienna, 1854, and Humphrey's *Journal*, 1856, have, water, one ounce; sulphate of iron, fourteen grains; nitrate of potash, ten grains; acetic acid, half a drachm; nitric acid, two drops.—Secretary.

Mr. Corlies exhibited some gelatin lantern slides, which were remarkable for their brilliancy and quality of tone.

A recess was then taken to view a number of the lantern slides, after which the meeting was on motion adjourned.

C. R. Pancoast,
Secretary.

A COMMUNICATION

From the Photographic Society of Philadelphia.

Mr. Edward L. Wilson.

Dear Sir: We desire to call your attention to the *improved* double dry-plate holder recently patented and manufactured by the Scovill Manufacturing Company, of New York, as being nothing new. To Mr. D. A. Partridge, of this city, belongs the credit of first designing double holders of this description. In 1872, Mr. Partridge exhibited to the Photographic Society of Philadelphia a double dry-plate holder opening on the end to admit the plates, and embodying all the points now claimed by the Scovill Manufacturing Company. Since that time this form of holder, which was named by the designer the "Philadelphia Photographic Society Holder," has been adopted by a majority of the members of that Society, and is considered by them the best yet produced. By giving this a place in the columns of the *Photographer*, you will confer a favor on

The Photographic Society of Phila.
C. R. Pancoast, Secretary.

GERMAN CORRESPONDENCE.

Making Clear Caoutchouc Solutions—On the Photographic Properties of the Ancient Purple—Making Sensitive Bromide of Silver—New Method for Making Colored Prints—American Pictures in Europe.

In my last letter I reported on Dr. Eder's experiments on the sensitiveness to light of the solutions of caoutchouc. It is known that these solutions form a more or less turbid matter, and Eder now publishes a receipt to make clear caoutchouc solutions. Thirty grammes of cut-up caoutchouc are put in a linen bag, which is fastened in a bottle, filled with one litre benzine, with a string in such a way that the little bag remains on the surface of the benzine. The thread is fixed to a cork and the bottle closed, whereupon the whole is left, undisturbed, six to eight days (no shaking). Gradually the soluble portion of the caoutchouc (forty to sixty per cent.) merges with the solution, while the contents of the little bag swell up enormously, without any particle of the gelatin-like residue in the bag getting out of it, if the bag is roomy enough. After this time the solution is poured off, without removing the swollen-up bag. The clear solution obtained thus is pretty thick, and contains 1.2 to 1.5 per cent. caoutchouc. The swollen-up residue retains about one-fourth to one-third of the benzine used, and may be employed in making a common caoutchouc varnish. If the caoutchouc is thrown upon the bottom of the bottle, it will be extracted only very incompletely. The caoutchouc solution obtained in this way is perfectly efficient as a substratum in drawing off collodion films with leather collodion. Thinner solutions make no sufficiently protecting layer, the collodion negative is mainly destroyed, in this case, by the pouring on of the leather collodion. Caoutchouc solution is now often used as a preliminary coating for Vogel's emulsion, and I have often heard the assertion made that the layer does not stick fast on caoutchouc, but is easily spoiled, which is, however, only true when the caoutchouc solution is too thin.

I must refer again to Eder's interesting history of the photo-chemistry. Last year I wrote you that the purple of the ancients was recently found, by Dr. Schunck, to be a photographic substance, as the original coloring matter is yellow, and only in the light is turned red. Dr. Eder finds, now, that this fact was known already long before. He writes: "It is remarkable that the old writers, especially Aristotle, Vitruvius, and Plinius, write much about the purple fish, and the purple fish dying, without mentioning anywhere that the sun has to act if all the beautiful color-effects are to be brought out. About the great influence of the rays of the sun upon the purple, the oldest remark, known to me, is found in a book under the title '*Ionia*,' written by the daughter of the Greek emperor Constantine VIII, Eudoxia Macrembolitissa, and celebrated as a writer in the latter part of the tenth century, and of which book a manuscript is said to exist in the library of Paris. Eudoxia describes how the stuff to be colored is dipped in the color solution, and then continues: 'The purple color becomes only then perfect when the stuff is exposed to the sun, for the rays of the sun impart to it yet greater brilliancy and make the colors darker, and their lustre is brought to the highest perfection through the fire from above.' In the seventeenth century, further mention was made of the color of the purple fish, and its relation to the light, by the Englishman William Cale, in Mineherd, who discovered on the shores of Somersetshire and South Wales crustaceous animals (*buccinum*) containing purple. He observed that the juice of the same, when smeared upon linen or silk, dyed them at first green, which color was turned by the sun, in quick succession, dark green, light purple, and (with a bright sky in a couple of hours) dark purple. Cale found, further, that each of these color shades remained fixed if the dyed stuff was kept in a dark place, and also noticed the emission of a garlic smell during the disintegration in the light. He sent some samples of linen dyed thus to the Royal Society at London, in November, 1684, and rendered a detailed account of his experiences. Reamur found a large quantity of buccinum on the shores of Poitu, and stated in the year 1711, in his treatise 'Sur une nouvelle pourpre,' that the light played a great rôle in the bringing out of the red color. According to his observation, the fresh juice of the animals is yellow, and turns only in the sun—first violet and then finally purple. Air alone, in the dark, did not effect the coloring, and also the light from a large fire acted very indifferently as regards the coloring process, although it was much warmer than the sunlight. Remarkably fast the purpling took place under the rays of the sun concentrated through a burning-glass. He deducted from his experiments the conclusion that a much higher degree of warmth of the fire would have to be obtained, if the same variations of the juice were to be made to appear as they can be obtained with the warmth of the sunlight." In reading these remarks one feels like exclaiming, "There is nothing new under the sun." Perhaps the organic chemistry will succeed to produce the purple dye-stuff artificially, as the indigo is now artificially made, and in that case the photographic printing process might enter a new stage of improvement. Paper would then be impregnated with the primary matter of the purple, then exposing it to the light, it would at once produce a picture in durable color.

Various attempts have been made already to produce the highly sensitive bromide of silver, which is to be found in gelatin emulsions, separately, to be mixed then with the gelatin. The first mention of this was made, I believe, by Abney; he precipitates bromide of silver with watery solutions containing glycerin. Now Lohse proposes the following modification of this method: Chemically pure bromide of potassium is dissolved in the requisite quantity of water, to which is added about one-eighth the weight of the total quantity of the gelatin destined for the emulsion, and after soaking the whole is dissolved in moderate warmth. In the dark the nitrate of silver is added undissolved, the mixture boiled half an hour, and enough spirit of verdigris added to the still hot matter as is deemed necessary to insure a thorough liquefaction of the glue. After some time the matter is poured in much distilled water, placed in a cylindrical vessel, and left undisturbed for some days. The bromide of silver suspended in the water is so fine that it cannot be retained by a paper filter, but in the course of a few days it will settle in the cylinder, so that the water resting over it, which contains the salts, the spirit of verdigris, and the gelatin, can be poured off. The remaining paste-like residue is treated with some ammonia in order to neutralize to some extent the spirit of verdigris, and can now be secured with the gelatin whenever desired, making a good emulsion with it after thorough shaking. Unfortunately, Mr. Lohse did not say anything touching the sensitiveness of the emulsion thus obtained, which is nevertheless always the main object.

Recently a method has been patented by a Mr. Rickert, by which in a very peculiar manner colored prints are obtained. It consists in the main part in coloring a photographic relief-plate, produced with chrome-gelatin, in such a way that the stronger and weaker gelatin layers assume different shades of color. The relief-plate is made as follows: A moistened sheet of paper is placed upon a level glass plate so that it adheres uniformly to the plate; upon this paper a not too thin solution of gelatin, consisting of one part gelatin and three parts water, is poured. This solution is spread out to the margin of the plate, and as much gelatin is cautiously added as the paper will take, without letting it run off.

After this gelatin paper has become dry, it is sensitized by dipping it in a bath of a solution of one part bichromate of potash in twenty parts water; then dry, print, and transfer the picture upon glass, the same as with the carbon process. In this way a hardly visible picture is obtained, in which the deepest shades are the strongest gelatin layers, and the higher lights the weakest layers. To provide the relief-plate with natural colors, proceed as follows: Dissolve one part of extract of logwood in one hundred parts water, and filter the solution through blotting-paper. When to be used, this bath is heated to about 10° R., and the yet moist relief-plate is placed in it. The gelatin absorbs now the dye-stuff contained in the bath in such a way that the thickest layers get saturated first, and therefore get sooner darkest than the thinner layers, which according to their respective consistency render lighter or darker parts. In this way, through the combination of the red dye-stuff with the potassa, a blue picture is found which renders all the shades and half-tones of the original. This object is, however, obtained only by using a warm coloring bath; for in a cold bath of the same composition all gelatin layers are colored so uniformly that the eye cannot discern any material distinction between the thickest and thinnest layers. The picture is left in the warm logwood bath so long, till the deepest shades have become transparent, when the plate is rinsed and plunged in a water bath prepared weakly with chemically pure nitric acid, about one part to four hundred parts. After a few seconds the plate is quickly taken out of the bath and carefully rinsed, when the following alteration of the colored gelatin layer will be observed. The acid affects the thickest and thinnest layers of the picture and colors the former brown and the latter red, leaving the middle layer blue and forming in the ranging layers between the corresponding transitive colors. The picture shows now the following colors: The strongest gelatin layer is of a non-transparent dark brown, and gradually to the thinnest layer follow brown, brown-green, blue, red-green, red, flesh color, white. The operation is finished now; but if the picture should become quite blue again after drying, plunge it again, as described above, in the acid bath, and repeat this manipulation till it retains all the colors in drying. This process offers many interesting peculiarities which might be used to advantage elsewhere.

Twelve years ago enormous quantities of European pictures were sent especially from Berlin to America, but it seems the tide has turned now, for in our show windows surprisingly many American pictures are seen, especially of beauties, which are much admired and bought. Especially the pictures from Sarony, Rocher (Chicago), and Mora, and in fact the pictures deserve the admiration they cause.

Very truly yours,
H. VOGEL.

FRENCH CORRESPONDENCE.

Process for Treating the Gelatino-bromide Residues—Experiments made with Celluloid for making Flexible Supports which cannot be Broken—Stops of Messrs. Stebbing and Boca with Adjustable Triggers—Double Shutter-Stop of Mr. Guerry—Emulsion of Mr. Jonniant, of Liege—Sensitive Paper and Enlargements of Mr. P. Morgan—Report Relating to the Gaillard Prize (International Concourse)—Claim made by Mr. Petit.

INASMUCH as the use of gelatino-bromide emulsion is already wide-spread, and tends more and more to take the place of collodion, it becomes very useful to have simple means to treat the residues of gelatino-bromide in order to recover the silver. Different processes have been recommended, one, for example, being to dilute the residues and to boil them with potash. It has also been suggested to use cyanide of potassium. Here is a new method proposed by Mr. Davanne which consists, after having diluted the residues, to add, according to the quantity, one or two whites of eggs. The whole is well mixed, and then heated for a few minutes to a temperature of 100° C. (212 F.). The albumen in coagulating takes hold of the silver, and the separation of the silver salt from the gelatin is thus easily and rapidly effected. This process is precisely similar to that used in clearing wines. On the one hand, we have coagulated albumen containing all the silver, and on the other, the gelatin. To extract the silver from the albumen use heat, then treat with nitric acid.

Much attention is being paid, and with good cause, to the seeking of new supports for sensitized films offering the advantages of being flexible, very translucent, very thin, and unbreakable. Two seekers, Mr. Fortier and Mr. David, have undertaken, independently of each other, experiments for obtaining sheets of celluloid having very plane surfaces, and offering all the qualities necessary for their application to the making of photographic negatives. This substance, which, as is well known, is a compound of pyroxylin, camphor, alcohol and ether, or preferably of collodion and camphor, is now manufactured at a price not exceeding twenty-two francs the kilogramme. Consequently the cost of celluloid sheets would be very reasonable, and it would be possible, if this substance is made available, to obtain thin, translucent sheets of a kind of horny substance sufficiently flexible and highly resistant. Up to the present time, however, the different experiments that have been made have not led to absolutely satisfactory results. Mr. Fortier, however, has succeeded in obtaining sheets of equal thickness, rather thin (about one millimetre), (one-twenty-fourth of an inch), and offering a plane surface that is satisfactory. He arrives at this result by placing a sheet of unwrought celluloid between two thin boards. He raises the temperature from 60° to 80° C. (140° to 176° F.), and allows to cool without pressure. The sheet thus treated remains plane, and is not, or but little, affected by the photographic manipulations. The sheets of celluloid thus treated are far from offering, nevertheless, the evenness of glass. We find on them numerous striæ, the fibres of the wood being marked upon the surface. Mr. David proceeded in another way. He makes use of hydraulic pressure raised to one hundred and fifty atmospheres, and he also uses heat. Like Mr. Fortier, he has remarked that celluloid sheets do not behave the same under pressure, according as they are confined between two metallic surfaces, or between two porous surfaces, such as those of fuller's board or wood. It results from this observation that this substance under the influence of pressure gives off an excess of alcohol which can be absorbed by porous plates, whilst this cannot happen with metallic surfaces. However, although complete success has not crowned these efforts, they are nevertheless very interesting, as they tend to lighten the baggage of the photographic tourist and to diminish the risk of breakage, as celluloid clichés would be much less fragile than those of glass. But in this connection let us not forget to say that this substance is very inflammable, and it would be necessary, in order to prevent the danger of the loss of a cliché by accidental combustion, to coat the two surfaces with an isolating substance of a less inflammable character.

The question of stops with adjustable triggers follows its normal course, in view of the realization of the interesting problems the solution of which has been asked for by us for so long a time. Two new patterns, one conceived by Mr. Stebbing, the other by Mr. Boca, photographic amateur, are in such working condition as to allow the variation of the duration of rapid exposures, and this in well defined intervals. We have already spoken of the Stebbing stop, which has been made with very great perfection, and whose principal advantages consist in the simplicity of its working and in its small size. It may be placed in the centre of the objective in the place of the diaphragm, its shutters opening from the centre to the circumference, and closing by the reverse operation. A box, containing a spring, moves around an axis, and the tension of the spring is augmented by increasing the number of turns. Numbers placed on the circumference of the plate, which forms the bottom of this sort of barrel, present themselves successively in front of a needle. It is possible, according as a greater or less instantaneousness is required, to increase or diminish the velocity of the movement. Each number may be made to correspond to a definite velocity, previously measured by any mode of graduation.

The circular stop of Mr. Cadett is constructed so as to obtain a similar result, but it differs from that of Mr. Stebbing only in as much that it is circular, and its size too great for objectives of limited dimensions. In regard to Mr. Boca, he has based his appliance on the law of falling bodies, either in space or through a fluid. It is the descent of a rod which causes the opening of the objective at the moment at which it commences to fall, and the closing at a point in its course which has been determined beforehand, for a defined duration of exposure. To retard the velocity of the fall, Mr. Boca has conceived the idea of transforming into a piston, with more or less open segments, the lower extremity of the rod, which works in a tube filled with water and suspended over the objective. The velocity of the fall of the rod will naturally be retarded by the resistance of the liquid, and the less the piston is opened the greater this resistance will be. Movable metallic segments allow the graduation of the fall for exposures of longer or shorter duration. It is possible, in this manner, to obtain exposures of but a few fractions of a second, but also to retard the fall, so that the exposure should be of a second and a half, and even more. This appliance, still in a rudimentary condition, needs perfecting, but the principle upon which it rests is an excellent one. It results, from what we have just said, that we now possess the instantaneous stop with variable exposures. In regard to the improvements to be made in these ingenious appliances, they will be the natural consequence of their introduction into practical use.

Mr. Guerry has conceived a double shutter-stop, with a pneumatic trigger, but the working of which cannot be regulated with precision. This stop may be used in three different ways. The two shutters—one of which moves from top to bottom, and the other from bottom to top—can give a continuous, uniform movement; or by means of a fork, placed on the shutter which moves from top to bottom, its movement may be accelerated with relation to that of the other shutter, so that the sky will have a shorter exposure than the foreground and the first planes. Finally, the movement of one of the shutters may be dispensed with, and only one used, moving from bottom to top. All these many improvements in this photographic accessory are the forced consequences of the much greater rapidity of the present sensitive films.

Apropos of these new sensitive films, let us mention a new improvement. Mr. Jonniant, of Liege, has just presented to the French Photographic Society a new emulsion, which he sells in bottles, like the Vogel emulsion, differing, however, from that of Dr. Vogel by the absence of pyroxylin. It consists of ordinary emulsion with bromide of silver in gelatin, of alcohol, and a very small quantity of acetic acid, one or two per cent. The ordinary emulsion is diluted with water, then the water is replaced by alcohol, and the acetic acid added. This product is sold in bottles. At ordinary temperature it is of a jelly consistence, and it is therefore necessary, at the moment of using it, to heat over a water-bath, and when it has become fluid the plates are coated with it as with collodion. The plates should first be slightly warmed. Mr. Audra, who has made a trial of this new sensitive substance, was very well satisfied in the double point of view of its sensitiveness and fineness of detail. Ordinary development with oxalate of iron is well adapted to this emulsion. Thanks to this product, photographers will be enabled, as with the Vogel emulsion, to prepare their own plates. It should not be lost sight of that this is what almost all of them desire, as there is no economy in purchasing prepared plates, these last being better adapted to the use of amateurs.

We have had an opportunity of trying the *instantaneous paper* prepared by Mr. Morgan, and of seeing, also, very fine enlargements obtained on this paper, and in a few seconds. This paper is prepared with a coating of bromized gelatin, and naturally is as sensitive as the plates covered with this same substance. Its use for enlargements affords double advantage—rapidity of execution and economy in the cost. An ordinary magic lantern lighted by coal-oil is used to throw the negative on the sheet of paper, which has been properly stretched, and in a few seconds an enlarged positive is obtained, which is developed in an oxalate of iron bath composed as follows:

A.—Sulphate of Iron to saturation in water with the aid of heat.

B.—Neutral Oxalate of Potash in water with the aid of heat.

C.—Bromide of Ammonium; solution at 12 per cent.

Take in the following order to make a mixture: 50 c. c. (1 fluid ounce, 5 drachms, 31 minims) of B, add to this 12 c. c. (3 drachms, 14 minims) of A, and 3 c. c. (49 minims) of C. The development may be made in from four to five minutes when the exposure has been suitable. This should be regulated to twenty-five seconds, at the distance of sixty centimeters (24 inches) from a lamp. But it varies necessarily according to the capacity of the clichés. Now, wash and fix in a solution of hyposulphite of soda 12 grammes (3 drachms Troy, 5 grains), water 150 c. c. (5 fluid ounces, 34 minims). Wash and pass in a saturated solution of alum for three minutes, then wash anew and put to dry.

In case the paper has acquired a slight yellowish tint, it may be whitened by rapidly passing it in water very slightly acidulated with chlorhydric acid. Wash again well, re-alum, wash and finally dry. For small prints this paper cannot yet rival albumen, but it can be used for printing a large number of prints which have to be rapidly produced. The black tone would require to be modified, but that is not possible except by using a coating differing from the ordinary gelatino-bromide. We are not very far from the time when these new positive processes will be so perfected as to combine, with their great sensitiveness, all the other qualities sought for in prints which are at the same time pleasing to the eye, and lasting.

The French Photographic Society had appropriated the Gaillard prize of five hundred francs to a concourse for flexible negative supports which can take the place of glass. Four competitors, it appears, had offered themselves, but the committee did not find that their processes were of a character to merit the prize. It has, therefore, decided to prolong this international concourse until the end of December, 1881. We have no knowledge of the processes presented, but, in our opinion, this problem is certainly of very easy solution. As a provisional flexible support, paper appears to us to be the most suitable. Upon this support may be placed the final support, which may be a sheet of sensitive gelatin confined between two pellicles of collodion. The provisional cementing of this system of three pellicles to the paper, may be done by the aid of a solution of caoutchouc in benzine, or by any other means, gum, etc. Thanks to sensitive pellicles of this kind, all needful operations may be performed, such as reversing the negatives, their application to glass plates, etc. If you ask why the sensitized films are placed between two thin films of collodion, it is to avoid the action of humidity on the gelatin, and it is also in order to prevent the rolling up of the pellicle, so that one pellicle of collodion balances the other. In this way no distortion is possible. It might be possible even to dispense with the paper and to make sensitive films simply confined between two films of collodion. As development may be made through the collodion, we find nothing but advantage in using this process. We may add that the negative becomes already varnished, and that its desiccation is easily done and without fear of injury to the interior film, which can never become sticky as is the case when the gelatin is on the surface. We have never competed, and we do not intend to compete for the Gaillard prize. We therefore willingly abandon our ideas to those who, believing them good, are desirous of running the chance of winning the five hundred francs that have been promised, but which are placed at the top of this new kind of climbing-pole. (*Mat de cocagne.*) The clichés made on pellicles offered for competition should be addressed to the committee of the Gaillard prize.

Leon Vidal.

Paris, April 1st, 1881.

PERTAINING TO THE

Be Ready.

The time is hastening towards the day set for the convening of the Photographers' Association of America. The intervening weeks will pass rapidly, and we urge preparation by the fraternity to meet the occasion. Every one interested in the progress of photography we invite to come, and not only this, but to add something that shall identify them individually with the occasion. The place selected for the Convention is of ample proportion to care for all contributions, and it is hoped that every one will respond, even if circumstances prevent joining personally in the meeting. The exhibition of the products of your skill as a photographer will prove valuable to those who are fortunately able to attend, and will show that your heart is in your work. We want your support and countenance for the Association. Photographers must not stand idly by and see other sciences, arts, and industries in the van of progress with their associations, conventions, and expositions, and not follow suit.

Having tested the value of an organization covering the whole of our continent, and having seen it after a few years pass away, the spirit which brought it into being, dormant for a time, awaking to new life in the Photographers' Association of America, which at Chicago, last August, held a convention and exhibition, remarkable in its harmony, large attendance, and interest displayed in the great future of photography, no one in the least identified with our art-science can afford to remain passive in the matter, but should enter with enthusiasm into the work of progress which the Association has begun. If you are not fully acquainted with the purposes and aims of the organization, send your address to the Secretary, and he will mail you a copy of the manual of the Association that will in a clear and concise manner give all particulars.

The coming Convention promises to be one of unusual value and interest to the whole photographic world, in view of the efforts made to secure the best talent for its educational features both in the theory and practice of photography. Manufacturers are making extensive preparations to display the most complete line of requisites used by the craft ever exhibited. If you are an employer, set an example to those who serve you, by joining in the good work, and show that you value educational efforts. If an employee, show those you serve that you belong to the progressive school, and mean to know what is going on, and to keep pace with the age. There is no use shirking or excusing yourself from a plain duty. Read the annual announcement published in this journal, see the names recorded for progress, enroll yourself at once, and prepare to show who you are and what you are doing.

The building selected for the meeting in August is large enough to hold all the photographers in America, and we want a handsome percentage of them there. The Local Secretary, Lafayette W. Seavey, will prepare space for an exhibit from every studio in the land, so do not fear that you will crowd others out. The larger the number who will go, the lower the rates for transportation, so send the Secretary your name at once, and have that duty off your mind, then go on with the work of collecting examples for exhibition and arranging your affairs for the journey. You are wanted in New York at the American Institute Building, Tuesday morning, August 16th, and we expect to see you there on time.

Gayton A. Douglass.

What We Hope for It.

The time will soon be upon us when we have to get ready for our trip to New York. How times flies! It seems to me but yesterday that I saw friend Klauber looking with an intensity for something at the bottom of Lake Michigan, on that never-forgotten "Flora" excursion, or the ladies trying to hide their emotion at the grand and overpowering sight of the blue ocean, or lake, I rather should say; well, never mind, the effect is all the same—and soon shall we see all those dear faces of our old acquaintances again, and I hope a good many new ones, assembled to learn and to teach. The members of the committee will, I am glad to hear, have everything arranged, dark-room, light, cameras, chemicals, etc., so that more time can be spent, and certainly more profitably, in witnessing practical demonstrations than in listening to long and windy lectures. What I would like to see would be that some of our young and old heroes of the camera would volunteer their services to demonstrate, one, for instance, the different modes of reducing and intensifying of negatives, or how to coat large plates, or how to print vignettes, etc. I also would like to see some of our dry-plate men go through the whole operation of making dry plates. This might be done in open daylight, as we need not care for results, but would like to see the manipulations. This demonstration, which might be repeated, if necessary, every day, would be quite an attraction, *though private interest might injuriously be affected thereby*, and to many photographers this alone would repay the trip a hundred times.

If a skylight and operating-room would be at our disposal, another might show his dexterity in taking babies,—I agree to furnish them,—and from what I have learned, this, our next meeting, will be the most interesting and instructive one we have had yet. The officers of our Photographers' Association of America will no doubt attend to all this, and better than I could suggest; yet I thought, as one who has been at all our conventions, and as Vice-president for the State of Missouri—emoluments not stated—I would give you just a bit of my mind.

Yours very fraternally,

R. Benecke.

St. Louis, April 23d, 1881.

MR. G. GENNERT'S PRIZE OFFER.

We are requested to print the following:

The undersigned, desirous of increasing the interest in the coming Convention of 1881, of the Photographers' Association of America, and in the growth and improvement of our art, begs to call the attention of progressive photographers to his offer of three prizes for the best examples of plain photography sent as below within the time, and upon the conditions following:

The Prizes are

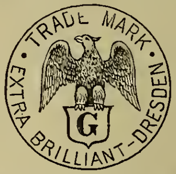
No. 1. $50.00 for the best five cabinet size negatives, retouched or untouched.

No. 2. $30.00 for the *second* best five ditto.

No. 3. $20.00 for the *third* best five ditto.

Proofs.

A proof from each negative, printed on the Eagle brand of Dresden Albumen Paper, unmounted, and the above stamp to appear on the back of each print, with the private mark only of the photographer upon them, must accompany each parcel, together with a letter describing said private marks, and giving full details as to the production of the plates and prints.



The Judges

will be appointed by the Convention, and to them the negatives will be handed; they will *award the prizes* and announce them to the Convention.

The three successful lots will be offered to the publishers of the magazines, who will draw for a choice, to illustrate their periodicals.

The Time

given to prepare and send negatives will be limited to one week previous to the opening of the 1881 Convention, and no late ones admitted to competition.

All negatives and proofs must be sent, *prepaid*, to Mr. L. W. Seavey, Local Secretary, No. 8 Lafayette Place, New York.

As this offer is made with the desire to improve photography, a generous and lively competition is hoped for.

The Judges will not know whose work they are examining, or to whom the awards are made, until after their decision is rendered.

G. Gennert,
Importer of "Eagle" and S. & M. Dresden Paper,
No. 105 William Street, New York.

PORTABLE DRY-PLATE OUTFITS FOR AMATEURS.

Thus reads the heading of a four page sheet we have received from Scovill Manufacturing Company at this seasonable period. It is a list of such things as the amateur emulsion plate worker may obtain to enable him at the lowest cost to produce photographic views to his heart's content.

We have known for some time that Mr. W. Irving Adams, the Agent of Scovill Manufacturing Company in New York, has been arranging for this new era in photography, and we are glad of it; for, as we have often predicted, the time is coming when the camera and the lens will form a centre of interest in and be a part of every enterprising and tasteful household. A few hints only to show which way things are moving, as to the contents of this sheet, and then the reader must apply for a copy of it, which will be freely given:

We beg to call your attention to the following price lists. Outfit No. 201, price, $26.50; consists of a mahogany polished camera for taking pictures 4 x 4 inches, with *folding bellows body*, single swing, hinged bed and brass guides. It has a shifting front for adjusting the sky and foreground, also one patent double dry-plate holder, one tripod camera stand, one neat case to contain camera and holder. There are other similar outfits at $27.00 and $41.50. Morrison's wide-angle view lenses are of course offered in variety, as well as Morrison's rapid stereoscopic lenses, also the "Peerless" quick acting stereoscopic lenses for portraiture or views, and imitation Dallmeyer lenses for landscapes. Then comes a list of less finished goods called the "ne plus ultra outfits," also made by the American Optical Company, and warranted accurate in every respect. Outfit A, complete, price, $10.00, comprises a view camera for making 4 x 5 inch pictures, one patent double dry-plate holder, one tripod camera stand, one Waterbury achromatic lens with standard English flange. Then there are other outfits at $12.00 and $18.50. The Keystone gelatin dry plates (Carbutt's) are now controlled by Scovill Manufacturing Company.

Of course all dealers keep these goods, so there is no excuse for any one not becoming a good landscape emulsion artist of the first class.

THE REAL RIP VAN WINKLE OF PHOTOGRAPHY DISCOVERED.

We have a vague idea that time and again, and more than twice upon a time, we have read in the St. Louis *Practical Photographer*, from the pen of one "Scribbler" or another, some allusion to "the sleepy sentinel of the East," etc., etc. Our youthful and inexperienced cranium could not understand who was meant until the recent enlightenment (thanks), "given away" to us by Anthony's *Bulletin*, made the matter very plain.

But to the evidence: In the *Bulletin* for March the editor of that "compilation of foreign matter," proves to our entire satisfaction that *he* is the real Rip Van Winkle of our art, and that he is even now asleep to what goes on around him. It is *not* true that this was never suspected until the Chicago Convention took place, but it was proven there by his failure to put in an appearance, and help do his duty in spreading the fame of the new body. To be real "accurate," he was *at home* during the whole Convention, answering the urgent appeals of his friends to go and report the proceedings with only a dozy, dreamy "*l'us 'ave peace.*"

While he was thus slumbering, the editor of this magazine went to Chicago, employed the only reporters who attended the Convention throughout "*at his own expense entire*," and *was the first to give the world the news*. The St. Louis *Practical Photographer* did not pay one dollar towards it. The editor gathered items himself, and good-naturedly took what was *given* him, but he paid for no reportorial services that we know of.

We have his manly letter of thanks for what *we* were privileged to have him accept at our expense, and we prize it. After the work was all done, the risk all taken alone by the editor of the *Philadelphia Photographer*, then Mr. Rip Van Winkle of Amsterdam extract awoke and asked for a copy. He was allowed to have it by our consent only (as we wanted *everybody* to know the news), and a copy was sent him by Messrs. Gray, Hewitt & Co., our own special reporters, C. O. D., $50.00.

And now, while he grieves over his nap, he asks "Who pocketed our $50.00?" Why Adams Express Company, of course—and the reporters—*we* who did the work! This *may* all be an "ideal theory" (see March *Bulletin*, page 80, third notice on this score), but it is the fact. To be "explicit," we *were* the only editor there who reported the proceedings of the Convention through our own employed reporter. We offered to share the privilege with the other magazines—Mr. Fitzgibbon declined; Rip Van Winkle was asleep. President Ryder, Secretary Copelin, and our reporters can all testify to this. We only ask credit for being awake.

Another evidence of sleepiness, and we are done. In speaking of the new series of the *Photographic Times*, the *Bulletin* Editor says there are now "*four* independent photographic magazines in America, while in England there are only two." Does he forget that both of the English ones are weekly, and therefore England gives the world *twice* as many journals as America does? No! He *forgot* not, but was asleep again, and thus the British journal wakes him up with a sharp thrust:

"Anthony's *Bulletin*, in noticing the first number of the *Photographic Times*, under the new management of Mr. J. Traill Taylor, indulges in some congratulatory remarks which have an irresistibly comic sound to British ears. We quote from the *Bulletin*: 'We congratulate the photographic fraternity on now having four "independent" monthly journals—the *Bulletin*, the *Times*, the *Philadelphia Photographer*, and the St. Louis *Photographer*. This new "Declaration of Independence" will make the year 1881 rival the famous days of '76, and Great Britain with her *two* photographic journals will have to knock under and confess herself worsted by the American superior number of *four*.' Oh! Messrs. Anthony! we might exclaim '*Et tu Brute!*' after the really 'independent' manner in which you make use of Great Britain's 'two photographic journals' to fill your own columns."

And, finally, the *Bulletin* scolds us for making fun of its "foreign matter." We have only to point to the above in reply. Oh, wipe the foreign matter from your eyes and "l'us 'ave peace" *dear Bulletin*.

THE TRUE INVENTOR OF PHOTO-TYPOGRAPHY.

LETTER FROM MONSIEUR PETIT.

OUR readers will remember that in our March issue we presented two specimens of a new photo-engraving process, almost identical in their effects, and yet produced by parties, who claimed to be their inventors, many thousands of miles apart. The thing sometimes occurs that "great minds think alike," and, as the examiners in the patent-office know full well, it becomes a difficult point to decide *who thought first*. There seems to be some doubt in this matter of the invention of similigravure, as the letter which follows from Monsieur Petit indicates. We have no means of settling this controversy, if such it be, and can do no better than to give the gentlemen (to both of whom photography is much indebted for their discoveries) a chance to say what they believe. We therefore most willingly give place to Mr. Petit's communication as follows:

EDWARD L. WILSON: As I believe that in your journal, as is the case in all French publications, any person whose rights have been questioned is entitled to be heard, and that, moreover, I address myself to a fair-dealing man, I hope that in your next number you will make known the object of this communication.

Mr. Frederick E. Ives, in the March number of your *Philadelphia Photographer*, claims the priority of the idea of using the bichromatized gelatin relief for obtaining a half-tone image which may be printed from typographically. I maintain, on the other hand, that I am the first inventor of the process. There is but one way to solve the question, and that is to fix the date on which the first patent was issued. Now, mine was taken out August 8th, 1878, and until Mr. Ives makes known the date of his, I have the right to consider myself, not only in France, but everywhere else, as the sole inventor. In regard to the question of detail, a number of persons have used, and they all have praised the merit of, my process, which has now been worked for a year and a half.

In the hope that you will favorably consider my request, I remain,

Yours very truly,
Ch. G. Petit.

P. S.—The plate which you have printed from is one of the first I had made, and when Mr. Vidal asked me for it, I had already, at that time, been furnishing plates to the trade for at least fifteen months, and much superior to the one I sent you—a subject you chose for yourself.

Paris, March 28th, 1881.

CAN YOU TELL?

Is there any reason why a photographer should not be neat in appearance, wholesome to the eye and nose? It is a fact, that, as a class, they are careless of dress, indifferent to quality of exhalations from their person, and oblivious to the figure cut by the exhibitions of laboratory-stains on hands and clothing. Now, this is a matter that can easily be remedied, and affects not only the standing of the photographer, but has a decided sanitary value to himself and the community. The dress does not require to be of finest quality or latest design to be neat; but it does ask a little protection during the working hours under the light and while manipulating. You can shield your garments by having, at slight cost, an apron of wood run up at edge of sink, which will be a protection from the splashing of chemicals; and, with little ingenuity, you can make, from sheet gutta-percha, for a trifle, handy devices for holding your plate and covering the hand while working the same during the several dark-room changes. They are easily made, and used with perfect safety. We see them in many chemical-rooms, and all speak of their usefulness. A garment of some dark-colored, inexpensive fabric, and a light skull-cap of silk or worsted for the head, keeping the hair shapely while under the focussing-cloth. Your business requires you to meet ladies and children, and they should have, aside from courteous treatment, the cleanly air and habit of a gentleman. Besides, men are not indifferent to these things. Ventilate your gallery, and be particular in following this rule with your dark-room, seeing that everything is kept clean about the place. The vapors from your chemicals cling to your person, making frequent visits to the bath-room, with lavish use of soap and water, a prime necessity. The use of the dark-room for other purposes than those called for in the practice of photography should be stopped; proper places in all studios should be handy for nature's calls. It is not our purpose to argue the tobacco habit, to which many photographers are slaves. It is uncleanly to the person and gallery in any form. By a little careful observation, you can see yourself as others see you, and revel in the nauseating atmosphere clinging to self and studio, while cuspadors, hidden corners, and stove emit sickening smells from stale tobacco expectorations. Clean up.—*Douglass, Thompson & Co.'s Bureau of Information.*

VOICES FROM THE CRAFT.

Our Plan Approved.

Among many kind letters we have the following: Looking from the standpoint of the country photographer, who has fewer advantages in the prosecution of art study than his city brethren, your *Mosaic* studies are decidedly the best and most useful illustrations that have ever graced the "Photographer." Though our average subject is anything but a model of grace and beauty, a "plug" indeed must he be who cannot catch enough of the spirit of art from such studies to give our customers at least the semblance of "the human form divine."

I trust that so many of your subscribers will respond to your query in April number, as that you may feel doubly assured that you have *not* "blundered" in giving us illustrations of this character; and then for Vidal and Vogel's French and German gems. C. E. HOWARD.

BEDFORD, PA.

AND another appreciative letter reads thus: Your journal will not make a poor photographer a first-class artist if he has not the ability, but if he studies the contents, and is interested in his business, he may greatly improve in his work. And the photographer who really is good, and imagines himself at the head of the art, would soon be left behind his brother if he did not have some communication with the fraternity. Hence your journal is much needed, and should be taken by every photographer who wants to keep along with the times. It is a great medium whereby we can exchange our ideas, and thus improve our original inventions.

Respectfully yours,
CHARLES LATHAM.

BRADFORD, PA.

[We are glad to see our magazine serve a useful purpose, and its pages particularly welcome the interchange of ideas among the craft.]

THE POOR OF THE CRAFT.

CAN nothing be done to promote the general interest of the "*poorer*" members of the fraternity? I do not think there are more, or even so many, seedy, half-starved men in any profession or business as in the ranks of the photographers. What is the real cause of it? I have lately arrived here from the East, and have been to Oregon, but find it the same here as elsewhere—a small number doing fairly and some making a living only, but the greater number living on the future, which is not very satisfactory diet for a man and his family. Here they even offer twenty small pictures for twenty-five cents, and so in proportion, prices which will prevent any one living honestly.

Please ventilate the matter in a small corner of your valuable paper, and greatly oblige an old reader and well wisher.

A. CHAUFORTH.

SAN FRANCISCO.

[Let us hope for discussion on this score, also.]

THIS is also good. We do not print these kind *voices* because we feel flattered, but as an evidence of *growth* on the part of the craft we work for.

I am anxiously looking for that new book of yours. I hope it will be a chemistry as well as a book of formulæ, and also that the whys and wherefores of manipulation will be given with the rest. The more I read your photographic literature the more I like you as a man, and the more thoroughly convinced am I that you are the best of friends to the photographic fraternity.

Those twelve pictures from Rocher were certainly studies; if you continue to give us such, there is no doubt of the success of what you call your picture project. I, for one, appreciate your efforts, and will support by subscribing the needful. Do as you have been doing, and the best will stick to your standard. Please accept the best wishes of Your friend,

JAMES E. GAUSE.

COVINGTON, TENN.

THE *Mosaics* for 1881 I find to be a perfect "little gem," and I would say that I would not take many times its cost if I could not get another one. I pride myself on having painted a nice, plain background by following the plain and comprehensive instructions given in the *Mosaics*, on page 77, by J. S. Young. I can recommend the above idea to all who desire to make a nice, cheap ground. Yours, etc.,

F. P. BURNHAM.

EAST NORTHWOOD, N. H.

FROM a veteran photographer we have the following:

Inclosed find seven dollars, "currency of the realm," to pay for the *Philadelphia Photographer*, 1881, *Photographic Times*, and *Pictorial Effect in Photography*, by H. P. Robinson. "If they can but see when their eyes are open" is the best thing you ever said. The trouble with the great majority of photographers is that they will never be able to see the lines of beauty in their subjects, and their patrons are equally blind, many of them, or else their occupation would soon be gone. Yours,

C. Tomlinson.

Elmira, N. Y.

A Good Cure.—A firm saved by taking the *Philadelphia Photographer.*

Inclosed find post-office order for $5.50. Please send the *Philadelphia Photographer* and the *Times* from the first of January, 1881. We were sick all last year, and did not find out what was the matter until we thought we had not had the *Philadelphia Photographer.* We want it bad now, and hope to keep up our subscription till we go hence, to a place where there are no old maids that want thin phizes taken to look like some school-girl or some actress, and where old women, with a face like the skin of an alligator, want to be made to look like twenty-five years back. So mote it be.

Fraternally,

Carson & Graham.

Some Good Advice.—Sometimes we get it thus:

I like the *Philadelphia Photographer* very well, but think some things about it might be improved, and will mention some of them, if you will not be offended by *friendly* criticism. *First.* There is too much *talk* about *nothing.* Some correspondents seem to write that have *nothing* to *say*, but wish to get their names in print. The ——— ——— ——— disgusted me with its "*folderol*," and I dropped it. The January number for 1881 of your journal has a good deal of useless talk without practical ideas.

Second. In reporting the meetings of the photographic societies, it is more important to your readers to know what *was said* on a subject than to know who was president, secretary, who visitors, etc., and what subjects were discussed. It would do good to tell your readers what the *drift* of these *discussions* was, and what points were made *in* the discussions, or give the discussions in full, or *papers.* I will mention no more at present. Will write you an article about how we *do things*, and giving our drying, fuming, and washing apparatus, if you wish.

Yours truly,

A. S. Stone.

Potsdam, N. Y.

[Our correspondent's criticisms are as useful to us as flattery, and we will be glad to have his ideas on curing the evils he mentions.—Ed.]

HOW TO AVOID RESITTINGS.

There are few photographers in such a happy condition that they are not asked to resit persons merely because some triviality in dress is disappointing, or the last new experiment with the hair "doesn't show as I thought it would." Indeed, this practice of claiming a retake on the part of the exacting public has become an intolerable tax upon the photographer.

There is a cure, and Mr. J. Landy, the well-known photographer in Cincinnati, claims to have found it. We append his letter as follows:

I enclose you one of my receipts. As nineteen out of every twenty resittings are demanded on account of some experiment with costume or style of hair, I have had the notice, which you will observe, printed in blue on all my receipts, and I find it saves a great deal of trouble, and gives the public to understand that experiments are at their expense. It has saved me many takeovers. If all photographers would adopt the same plan, they would have few resittings to make.

Fraternally yours,

J. Landy.

Cincinnati,..................188

Received from ....

$......... for..

J. Landy,

Per.......................

Number of Neg..........

An extra charge is made for all resittings when there is any change in the style of costume or arrangement of the hair.

We add above a reduced copy of one of

Mr. Landy's receipt blanks, such as he supplies to his patrons at the time of sitting, in exchange for money paid in advance. The blank is printed on pink paper in black ink, and diagonally across its face in blue ink, so that "he may read who runs," is the notification, which we have appended for convenience's sake at the foot.

We believe it would do much good if Mr. Landy's plan was generally adopted.

WRINKLES AND DODGES.

Rubber Baths.

We see in the March number of the *Philadelphia Photographer* an article on rubber bath-holders, by Mr. Woods. Our experience was about the same, but the manner of getting over the difficulty was slightly different from Mr. Woods. We took equal parts of wax and paraffine, put it in a suitable vessel, and melted it; making it very hot, then pouring it into the bath-holder (it being previously heated so as not to chill the wax), flowing from side to side until a thorough coating is formed, then pour the balance out, and set the bath-holder away to cool; after cooling it is ready for use. Care must be taken that the bath-holder is not made so hot as to get soft or melt. The cap should be treated in the same manner, not forgetting to heat it before coating with the wax and paraffine. In doing so we never have any trouble with rubber holders.

The *Philadelphia Photographer* is a necessity in all well-regulated galleries, so inclosed find five dollars for another year.

D. Filson & Son.

Repairing Backgrounds.

S. P. L. can easily repair his graded ground with warm water, a large brush, some umber, and lamp-black for the dark side, and whiting for the light side. First thoroughly wet with brush and warm water, then work in a little black on the dark side, and whiting on the light, carefully brushing and working until too dry to run. Can make a new ground just as easily by following the directions in *Mosaics* of this year.

J. S. Young.

Coating for the Skylight.

I recently coated my skylight again with gelatin and whiting, which I described in an article you published in the April number of your valuable magazine, the *Philadelphia Photographer.* I did not give the proportions. I find it takes about one ounce of gelatin to from sixteen to twenty ounces of whiting, with one pint or more of water, according to how thick it is to be put on. If care is taken in getting it on even, it is the next thing to ground-glass, according to my notion.

H. W. Immke.

THAT SAME TROUBLE WITH PAPER, ETC.

In the last number of the *Philadelphia Photographer* I see that "Down South" has had the same trouble with paper that *I* had at one time—a spongy appearance. I did not throw my bath out as "Down South" says *he* did. I think the fault was *not* so much in the acidity of his bath as from *other* causes. *My* bath was *neutral*, and still I had exactly the same trouble as he describes. I boiled my bath down almost to dryness; filtered, and I think I must have had nearly half a teaspoonful of sediment. I reduced it (the filtered solution) to working strength, sunned for a day or two, till *perfectly* clear, and it was as good as new. A printing-bath ought to be boiled down and sunned at least once a month, I think. I neglected to say that in filtering the bath I place a lump of alum in the funnel, and the solution will take up what it needs, thereby making the surface of the paper harder and retain its lustre, and the solution will stay on the surface more, making much finer prints.

A little dodge I have for keeping my varnish clear of dirt. It is not original with me, but, as I have never seen any such thing in print, I send it. It is *very* expensive.(?) It cost me all of ten cents. I got a little tin teapot for five cents, and a small tin funnel for the same price; I had a tinner put the funnel in the cover of the pot. Put a tuft of cotton in the funnel, and filter the varnish through. When varnishing a plate, by pouring from the spout, the varnish always comes from the bottom, and if there *was* any dirt on the surface of the varnish it would not go on the plate. Drain the plate into the funnel, and by the time you are ready to use it again it is filtered. I would not be without it for anything. I never have a poorly-varnished plate, as a friend of mine does who uses a bottle, draining back into it each time all the dirt on the plate.

I made a cheap hypo-tray by lining a box with thin oil-cloth. Fold the corners in, and tack around the edges with brass tacks. It will not leak, and will last a *long* time; costs but a trifle.

These may both be *very* old, but perhaps there are *some* like *me*, who never saw it in print, and some who may not have thought of it. Use it if you like.

Allow me to offer you my *hearty* congratulations upon your success in obtaining such beautiful "studies" from the "*masters*" of our art. The idea is "*immense*," and may we see many more such studies. In your prospectus you promised us this year would be the *best of all*, and *surely* you are keeping your word. In the way of studies it beats all; and the operator, printer, or manipulator who does not take the *Philadelphia Photographer* will find he has made the greatest mistake of his life.

So sayeth your humble servant.

W. B. Glines.

Norwalk, Conn.

OUR PICTURE.

The season, which of all the year is most tempting to the out-door photographer, is again upon us with all its sweet witchery of opening buds and delicate green leaves. All nature seems calling us abroad, and it is with willing feet the photographer gathers up his apparatus and sallies forth to "make some views," in spite of the changeful skies that, like baby-faces, look down upon him, often with mingled tears and smiles.

Apropos to the season then, we give our readers "A Bit of Old Ireland," from negatives made by Mr. William Lawrence, Dublin, Ireland. There is probably no country, in proportion to its size, so full of just such lovely bits as the little island of "Green Erin." Its lakes, its mountains, its sweet vales, are an ever-changing panorama of beauty to the tourist. As the mountains are less grand than Scotland, so are they less solemn and awful in their ruggedness. Rich verdure and waving foliage here conceal the harsh stoniness which in Scotland so often are all the eye has to rest upon when in the mountain regions.

The views we have used are five in number. We could wish that it was in our power to supply *each* reader with the entire set. However, we will, as well as space allows, describe each in detail, that all may have an idea of what they are like, applying to Wilson's *Lantern Journeys*, Vol. II, for our information: First, we take up the Valley of Glendalough. This is one of those pretty scenes upon which the traveller loves to come after a long ride along the silent lakes or at the foot of the speechless mountains. Here stands one of those mysterious round towers, one hundred and ten feet in height, whose use no one has been able to discover, though a number of them are scattered all through the country. Here also are the "ruins of the seven churches," and beyond the upper and lower lakes.

"The lake whose gloomy shore
Skylark never warbles o'er."

The second is the famous Blarney Castle, situated a short distance from Cork. The main feature of the castle is a square tower with a battlement, and below the parapet is a stone, which, when you have kissed it, endows you with that power of "spache" which is most wonderful, and sometimes dangerous, commonly called "the gift of gab."

"Don't hope to hinder him,
Or to bewilder him;
Sure he's a pilgrim
From the Blarney Stone."

From gay to grave is but a step, hence we turn next to the Ancient Cross at Monasterboice, supposed to be the most ancient religious relic in Ireland, and dedicated to St. Boyne. It is twenty-seven feet high, and elaborately sculptured with figures and Irish characters, which still puzzle the antiquarians. One of the groups is said to represent two Irish harpers in Paradise, the idea of the ancient Irish being that Paradise itself would be incomplete without a harp in it.

Our collection also shows a portion of the Giant's Causeway. Though not a "pretty" picture, it is valuable as being a view of one of nature's greatest marvels. It is composed of some 40,000 columns, all beautifully cut and polished, formed of such neat pieces, so exactly fitted to each other and so cleverly supported, that we might fancy we had before us the work of ingenious human artificers. Of course, the Irish have a legend about it. Two giants quarrelled, one standing in Ireland the other in Scotland, and, to have it out honestly, the Irish giant constructed this causeway. The battle came off, the Irish giant being the victor, and after it they both settled down to live together in the most amicable manner.

We close our list with a few words in regard to Muckross Abbey, one of Ireland's most characteristic ruins. It is supposed to have been built in 1340, for the Franciscan friars. It has been for many years a ruin, though certain portions are in a good state of preservation. The chancel contains a fine east window, the tracery of which is still perfect. Here are interred the remains of several famous Irish chieftains, among them the Macarthy More, founder of the abbey. We trust that our readers will draw much pleasure, as well as instruction, from these samples of Irish photography.

We have printed an unusually large edition this month, to enable us to meet the probable demand from photographers desiring to obtain the full set of views. We are prompted to do this by our experience of last year when we published the Scotch views, and were scarcely able to fill the orders for extra copies from our usual monthly edition. The prints were made on Mr. G. Gennert's importation of Dresden paper at our own printing-rooms. The negatives were by the "wet" process. Lantern slides of all these subjects can be had.

Editor's Table.

Pictures Received.—Mr. W. B. Glines, Norwalk, Conn., sends us a very pleasing collection of samples of his every-day work, both card and cabinet size. From Mr. C. M. French, Garretsville, Ohio, several cabinet portraits and a 5 x 8 winter view of his charming residence. A pretty picture of a pretty place. Two cabinet bust portraits of young ladies from Mr. J. H. Lamson, Portland, Me. One of them is a print from an emulsion negative. The effect is extremely soft and porcelain-like. Mr. H. B. Hillyer, Austin, Texas, sends us a portrait of Hon. O. M. Roberts, Governor of Texas. A most excellent picture, carefully managed and well made throughout. From Mr. E. L. Russell, Blossburg, Pa., cabinet and promenade portraits of young ladies and children. A lot of fine stereo views from Mr. H. R. Farr, Minneapolis, Minn. Among them we notice several very pretty pictures of snow effects; also street scenes in Western and Southern cities. Mr. R. A. Bonine, Yuma, Arizona, sends us some curious samples of portrait work among the Indians. The subjects are taken in all their native grace of attitude and dress. As for instance, one brave appears in a calico shirt, a vest minus buttons, and a battered old stovepipe hat. His feet and nether limbs are clad in nature's garb only. Mr. T. H. Johnson, Olean, N. Y., whose advertisement for a partner appears among specialties, sends us samples of his work in card, promenade, and 8 x 10 sizes. These pictures can be seen at our office by any parties contemplating a favorable answer to Mr. Johnson's advertisement.

Artotypes.—Mr. Robert Benecke, St. Louis, Mo., has surprised us with a roll of artotype prints which includes excellent examples of work embracing almost every variety of subject which comes to the photographer for the display of his talent. Landscapes, bridges, animals, furniture, Indian weapons, antique pottery, articles of merchandise, portraits—all are beautifully printed in a style showing Mr. Benecke to be one of the few who has been remarkably successful with this difficult process. His panoramic views from his own negatives are superb.

The Scranton, Pa., local paper gives a very pleasing notice of Mr. L. R. Evans, the leading photographer of that town. Mr. Evans justly claims the name of "artist-photographer," since he is equally at home at the easel or the camera. His crayon portraits and colored work being the fruits of his own labor with pencil and brush. Mr. Frank McKnight, Cairo, Ill., sends us a very tastefully arranged invitation to his

Grand Opening on Monday, Tuesday, and Wednesday, March 28th, 29th, 30th. It is needless to say we could not be present, but we trust the crowds who doubtless thronged his rooms on the specified days were a harbinger of the flock of customers who will fill his rooms on every fine day succeeding.

THE *Ithaca* (*N. Y.*) *Daily* gives a lengthy description of the new photographic rooms of Mr. E. D. EVANS which were thrown open to the public a short time ago.

MR. G. GENNERT, importer of albumen paper, will remove May 1st to No. 105 William Street, New York, from No. 38 Maiden Lane.

ITEMS OF NEWS.—We take pleasure in calling attention to the advertisement of Mrs. CLARKE, 561 Druid Hill Avenue, Baltimore, which will be found among specialties. We have seen samples of Mrs. CLARK's coloring, and can freely say her work is all she claims for it. Our readers having such work to be done will do well to address her for terms. We are glad to learn that the photographers of Nashville, Tenn., have formed an association for mutual help and instruction. The new society is called the "Photographic Association of Nashville." Meetings to be held monthly. We shall be glad to publish the minutes of future meetings if the Secretary will kindly furnish them to us. The Boston Photographic Association is holding "cottage" meetings in the towns "near Boston." Many interesting matters are brought under discussion at these meetings; headings only of these are given in Society Gossip. We outsiders are somewhat in the position of the fox when the grapes hung too high for him. We would be very thankful if the Secretary would kindly let us enjoy the sweetness of the fruit along with the privileged members of the Society. The Chicago Photographic Association, at its last regular monthly meeting, discussed "the development of gelatin dry-plates." A fine collection of plates and prints made by this process was on exhibition, and excited much interest. The samples were sent by photographers in all parts of the country. *The Picture and Art Furniture Trade* gives a lengthy report of the above meeting. Thus photography insinuates its influence into all trades and professions. The Ohio Mechanics' Institute, Cincinnati, Ohio, sends us the report for 1881 in the form of a neat pamphlet containing a copy of the plan of organization and by-laws. Also a list of officers elected to serve during the year 1881. No. 2, Vol. I, of *Camera and Pencil*, is received from the publisher, Mr. B. FRANK SAYLOR, Lancaster, Pa. April, 1881, price-list of photographic chemicals is to hand from Messrs. CHARLES COOPER & Co., 194 Worth Street, New York. Mr. GEORGE W. HILLIER, the old-time and well-known picture-frame maker, has opened a new and beautiful store at 316 North Tenth Street, Philadelphia. Mr. HILLIER has been in the business for over twenty years. The style and quality of his work are well known among many of our readers. His enlarged quarters now enable him to fill large orders with greater dispatch. He solicits your patronage. Our readers, by referring to the first page of advertisements following *specialties*, will see notice of the removal of Mr. J. L. CLARK, the well-known gold and silver refiner. Mr. CLARK's growing business has necessitated this change. He is now prepared, in his more commodious building, to execute the increased orders he is hoping to receive from his old patrons. Messrs. DOUGLASS, THOMPSON & Co., *the* enterprising stock-dealers of Chicago, send us their various price-lists and circulars in the form of two large sheets, tinted paper, containing illustrations, descriptions, and prices of mats and frames. A circular announcing that they are now prepared to furnish *sensitive gelatin pellicle* for the use of the trade. A forty-eight page pamphlet *price-list of photographers' supplies*, a sixteen-page *illustrated catalogue* of lenses, and an eight-page pamphlet called *Hints on Burnishing*. A very noticeable feature of these price-lists, and one which greatly adds to their value, is the many bits of useful instruction and information with which the pages are so plentifully garnished. Messrs. WILSON, HOOD & Co., 825 Arch Street, issue a *special* circular this month calling attention to various changes in their prices of glass, glass baths, card stock, Seavey's backgrounds, solid glass baths, chemicals, nitrate of silver, convex glass, lenses, etc., etc. These gentlemen are the leading stock-dealers in this city. See their advertisement. We would call attention to the following notice:

419 & 421 BROOME ST.,
NEW YORK, April 9th, 1881.

Permit us to call attention to the fact that glass factories will be out of operation during the months of July and August, and it is therefore desirable that orders for supplies during those months be placed at an early date.

Yours respectfully,
SCOVILL MANUFACTURING CO.
W. IRVING ADAMS, Agent.

BACK NUMBERS WANTED.—We are still in

want of copies of June and August, 1880, *Philadelphia Photographer.* We repeat our offer of one dollar's worth of books for these numbers. We want them to make up complete sets of last year's volumes.

Mr. J. F. Ryder, Cleveland, Ohio, sends us a very tasteful catalogue of artists' materials, in which articles he deals largely.

Messrs. Peck & Snyder, 124 Nassau Street, New York, offer a very useful article in their advertisement, in the way of a "singing-bird" to "keep the babies still." Its tones are very natural, and it is sure to attract the terrible infant during the time of even an extended exposure.

Read the announcement of the Eastman Dry-Plate Co., inserted as an inset in our last issue, concerning their new emulsion pellicle. It will enable the photographer to make his own emulsion by its use.

Dear Sir: Please find inclosed money-order for four dollars. Will you please send me *Photographics* for same. A few months ago I purchased of you Robinson's *Pictorial Effect.* Could I not replace it, or get its equivalent, ten times what I paid for it would not buy it from me. I intend sending it to some of my friends to read; friends who are not especially interested in photography, as I feel confident it will add much to their enjoyment of any good pictures they may see. It does not seem to me that the reading of it should by any means be confined to photographers; many a person who now takes but slight interest, comparatively, in works of art and in landscape, would find that *Pictorial Effect* had opened to them a new world of pleasure. I don't know what I would do without the *Philadelphia Photographer.* Each number that comes makes me feel dissatisfied with my own work, yet, seeing what others have done and are doing, it makes me feel more enthusiastic and determined that I will accomplish something myself.

Yours truly,
S. B. Hill.

Scovill Manufacturing Co., New York, now supply the trade with a new patented graduate. The measuring rings pass entirely around the vessel, so that no matter how you pick it up, the scale is before your eyes. All sizes from minim up to thirty-two ounces.

Mr. Willy Wallach, 4 Beekman Street, New York, has favored us with a number of fine German pictures, sent by Messrs. Trapp & Munch, on their new "permanent pink" paper. They are very beautiful and the color delicate and soft. A blank piece of paper at the end shows that no change has taken place. We shall presently print "our picture" on this paper, when our readers shall see the results.

Correction.—We gladly give place to the following letter from Messrs. Marc & Schlum, whose picture mosaics we used in our last issue.

Dear Sir: Thanking you for your kind notice in your esteemed magazine, you would oblige by making the following correction in your next issue, as we desire fair play for every one:

We use a Voigtlander Euryscope lens for all our large work, but we do not prefer it to our Dallmeyer, a 3A. For this reason we make no comparison between either, as we use the Euryscope for all our work larger than 8 x 10. The Dallmeyer we use for cabinets, promenades, and 8 x 10, and it is perfectly satisfactory to us.

With this letter came a variety of splendid portraits of cabinet, promenade, and large card size, which wonderfully bear up the fine qualities of the lenses with which they were made. Many of them are of full length, in positions which required an extremely rapid exposure, and others of large heads which could only be made with a superior instrument. They all show the artist and the skilful photographer in every respect.

Prof. D. A. Woodward announces a great reduction in the price of solar cameras in his "specialties" advertisement this month. Almost any one can afford a solar camera now, at a less cost than one formerly had to pay for a patent stamp.

Messrs. Wilson, Hood & Co., 825 Arch Street, Philadelphia, send us a very complete price-list of dry-plate outfits. There seems to be a great "boom" in this direction now, and the live photographer will not sleep over it.

Mr. S. H. Parsons, St. John, Newfoundland, is one of our most successful emulsion plate workers. He has favored us with a series of coast and winter views of his region that leave very little to desire, either pictorially or photographically. The "beautiful snow," so plentiful all around this winter, is caught in most delicate conditions of light and shade—"beautiful," indeed.

J. F. RYDER. CLEVELAND.

A HOUSEHOLD GODDESS.

Boston Public Library.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. JUNE, 1881. No. 210.

THE DEATH OF M. ADAM SALOMON.

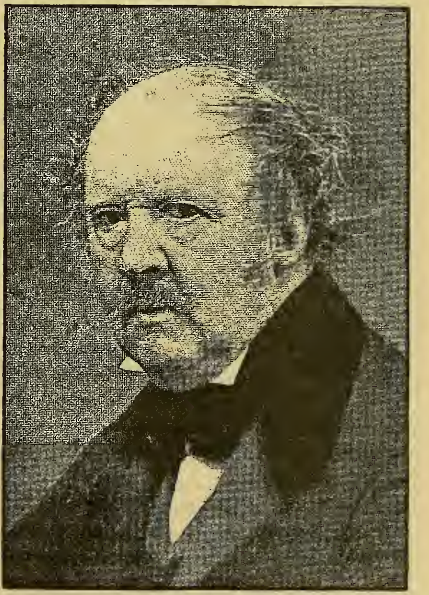
It is with most profound sorrow that we announce the death of Mons. Adam Salomon, the famed sculptor, the master photographer, and our beloved friend, whose name and fame are well known to our readers. He died last month at his home in Paris, near the Bois de Boulogne.

Further details may be found in our French correspondence.

In our next issue we shall give a sketch of his life and work, and "Our Picture" will be a "mosaic" made up of some of his best works, and include a portrait of our lamented teacher also.

FOX TALBOT.

The *Photographic News*, of March 11th, was accompanied by a photo-engraving of the distinguished photo-scientist, Mr. Fox Talbot, which we have caused to be reproduced and present below, that our readers may become familiar with the features of one to whom they owe so much. Mr. Talbot was born in 1800 and died in 1877. He began in 1839, with Daguerre, to publish his discoveries to the world, and we are indebted to him for the paper-printing process substantially as used now; the development-printing process; the albumen-porcelain process; an instantaneous negative process, and a fifth invention was a method of photo-engraving. The process by which the above picture was made, belongs to this last family, and may be appropriately used here to help keep alive the memory of one who has done so much towards the growth of our art.



ETCHING.

BY E. G. ROBINSON.

By means of the etch, the artist-photographer has a new and great power in his hands. Things before deemed impossible, are now the easiest things in the world to accomplish. In looking over some of the masterpieces of etching executed at some Philadelphia studios, the observer is apt to be rather awe-struck with the audacity with which effects are produced; a few scratches with a needle-point change the whole aspect of a picture. Indeed, the skilful etchist has scarcely any limit to his possibilities; for he may change or entirely remove the most important characteristic part or parts of a picture, and that, too, with an ease which seems wonderful.

It is my purpose in this paper to give the ambitious artist a few hints by which he may gradually learn this (now) important part of the art.

First, make sure that you understand the principles of drawing and perspective. I do not mean that it is necessary for you to be able to draw an elaborate picture, but that you are able to sketch a tree, a rock, a building, a scene, etc. Then get your tools; they are simply needles of different sizes, driven, eye first, into sticks about the size and shape of lead-pencils; leave about half an inch of the needle exposed, and taper the stick to the needle, as you would sharpen a pencil. As you advance, you will need other tools—a dentist's probe, a steel comb, and a knife for removing film. Now, your varnish should be of sandarac, and as thin as may be, and not have a resulting mat film. To a pint of varnish put in an ounce of oil of lavender, or castor-oil will do. Of course, on so thin a film you cannot grind the surface; therefore, as soon as the varnish is hard enough to work on, rub two or three drops of the following over the plate with a soft rag: one quarter ounce of balsam fir, one ounce of spirits of turpentine. This will give the negative a good tooth for a soft pencil, by which you make a sketch of what you are going to etch. In commencing to etch, do not attempt anything difficult at first. On an exterior, begin by putting in small stones, sticks, plants, etc. Never commence to etch anything until you know just what shape you are going to make, and how it is going to look when done. A good way is to draw a design upon paper, then on the negative with pencil; then commence to etch it in. Remember, it is very easy to get in too much, and not at all easy to dispose of a mistake—hence go slowly and carefully. A good way to get used to using your tools, is to help out intense white drapery by fine dots. It often happens in drapery of children that, owing to short exposure, the drapery does not all come out, and then it may be helped in the above manner. Observe how this is done in the picture by Gutekunst of Miss Detchon, in Wilson's *Photographics*, among the eleven poses of this lady, opposite page 76. Notice the long flounce of ermine. Again, the shape of the lady's waist and shoulder is changed in outline. Study good engravings and etchings, and see how they are done. Go carefully, and do not be in a hurry. More anon.

Michigan City, Ind.

WHAT THE "KEYSTONE" PLATES HAVE DONE FOR ME.

The bromo-gelatino dry-plate seems to be the absorbing topic among photographers at this time; and it is well it is so, as it supplies a want long felt of a ready prepared sensitive plate, and not only prepared, but so sensitive that there need not be any longer failures to obtain good negatives of small children and nervous people.

The quality of prints from these negatives surpasses those by the wet process, which I have been able to make in an experience of more than twenty-six years. But these plates are *invaluable* for making views of *interiors*, which are often poorly lighted, requiring hours, and sometimes even days, for a proper exposure.

I began this article for the purpose of telling my experience with Mr. John Carbutt's Keystone Dry Plates, the results of which have astonished me, and many critics who have seen them. A few months ago I had an order to photograph the interior of a church here, with dark frescos, windows of yellow, red, and green glass, there not being ten square feet of white glass in the whole building.

I believe it impossible to make a negative in this building by any wet process known.

I telegraphed Mr. Carbutt for some 18 x 14 inch plates, which came in due time, and exposed one eleven hours, (parts of two days, the shortest and darkest of the winter,) the result being the best negatives of an interior I have ever seen; full of detail, harmony, and brilliant, at the same time soft and of the very best printing qualities. Smaller plates were also used with two hours' exposure, with the same results.

I have used Mr. Carbutt's Keystone Dry Plates about a year, and always feel sure of good results. The large plates are *perfect* in film, exceedingly so. Even in thickness, entire freedom from spots or other imperfections, and always adhering to the glass—one 14 x 18 was under development three-quarters of an hour, the film as firmly attached to the glass as at the beginning. I cannot see how better plates can be made. I, for one, desire no better. I find them equally good for portraits, interiors, and exteriors.

Development is easy and sure when following the very concise and simple instructions given by Mr. Carbutt.

I am induced to write this communication for the purpose of encouraging some who may feel that the gelatin dry-plate process may be attended with great difficulties, to take up the use of the new plates, and recommend those which I have used with signal success, believing they will be benefited and pleased thereby. Mr. Carbutt does not need any commendation from me, as the thoroughness of all he does is too well known.

Now, Mr. Editor, I have a suggestion to offer, and then I am done, and it is that members of the Photographers' Association of America bring some of their bromo-gelatino dry-plate negatives to the Convention in New York, next August, for study and comparison. I believe it would be an interesting feature.

D. A. Clifford.

Read Wilson's *Photographics*. See testimonials on blue sheet herein.

DEFECTS IN COLLODION TRANSFERS.*

It may be perfectly correct that by far the larger proportion of the "collodion transfers" now produced are *not* works of art, or such as are calculated to excite rapture in the minds of the "intense" æsthetic denizens of South Kensington; yet, owing to the moderate price at which they are produced, many who otherwise could not afford it are enabled to possess (to them) valuable *portraits*, although they may not be strictly works of art. Still, the process is one which is capable of producing results, both as regards tone and quality, which no photographer need be ashamed of; but, in order to secure this excellence, a much higher degree of skill must be brought to bear on the work than is generally done.

The employment of the collodion transfer process is now principally confined to the production of what are designated "club portraits"—indeed, "club portraits" and "collodion transfers" now appear to be synonymous terms; and so great is the competition amongst those who make this class of business a specialty, that it is surprising the work proves even fairly remunerative. It is the continued race after cheapness which has degraded the quality of the work, and has tended to bring this simple yet useful method of making enlargements into such disrepute amongst the higher class of photographic artists. In order to produce enlargements at the price at which they can now be procured, recourse is had to the cheapest and commonest of materials for their production, as well as, in many instances, labor of a very mediocre character. The employment of low-priced materials, however, does not always imply economy, if we may judge from the several communications which have from time to time appeared in our columns, as well as letters from correspondents seeking advice as to the cause of certain defects, many of which can clearly be traced to the use of impure or unsuitable chemicals or undue haste in manipulation. Few transfer operators think it repays the time to filter their solutions, while the careful negative operator always does.

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* "Collodion transfers," *i. e.* "megatypes," being now in vogue (the process in full being given in Wilson's *Photographics*), we will from time to time give our readers useful hints concerning them. In England, this style of picture is much used.—Ed. *P. P.*

A short time since we were asked by a correspondent, having a large experience in this class of work, to account for certain spots on the pictures which at times made their appearance in a most mysterious manner. One curious and perplexing matter in connection with them was that in the case of two operators working in the same room, one got spots in myriads, while the work of the other was said to be perfectly free from them, both using the same collodion, etc.

In our last number Mr. D. Robertson is inclined to attribute the cause of one description of spot to some of the powdered talc with which the plates are treated not being carefully dusted off before the collodion is applied. This would undoubtedly be liable to produce a certain kind of spot; but it was not the cause in the case mentioned, as the spots had a comet-like tail, which was always in the reverse direction to that in which the collodion was flowed on the plate. This would not have been the case had the talc been the cause, or had the spot proceeded from part of the iodizing salts crystallizing in the collodion, which it is apt to do in very cold weather. Another cause assigned by our contributor for spots is the use of impure collodion, which contaminates the bath with organic matter, and which in time becomes precipitated as a black deposit.

Now it is quite possible that if particles of this organic compound of silver be adherent to the surface of the collodion film during exposure, it will be reduced to the metallic state when the developer is applied, and thus produce spots. A large proportion of the collodion now used for transfers is made with "methylated spirits" (owing to its cheapness) instead of pure alcohol; and there is no reason why it should not answer the purpose quite as well, providing it could be obtained in a state of purity, for the wood naphtha itself (methylic alcohol), if pure, has no injurious action whatever on the bath. The methylated spirit of commerce, however, is rarely, if ever, pure enough (although its strength may be sufficient) to be employed for collodion making, because the alcohol itself is generally of the crudest possible description, containing, as it does, all the impurities of the first distillation, while the naphtha with which it is mixed —in the proportion of ten per cent.—is also of the most impure description.

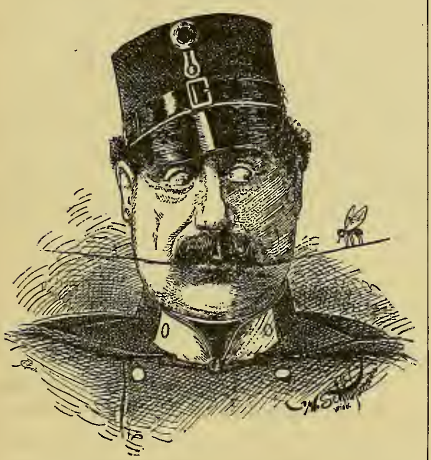
If any one wish to see the impurities in the methylated spirit of commerce, let him put a pint or so into a glass retort, and distil at a low temperature in a water-bath. After the spirit has passed over, a considerable quantity of dense brown empyreumatic and tarry matter, with a most offensive odor, will be found remaining in the retort. This residue would have a most pernicious action on a silver solution, and would fully account for methylated collodion so often disarranging the bath.

There is another cause that may give rise to spots in collodion transfers which is not met with in connection with negatives, and to which we draw attention. It is the custom with most who make these enlargements to expose the plates not in the camera but in the dark-room, where the development and fixing of the pictures are carried on, so that during exposure the plate has no protection whatever from any particles of floating matter that may be present in the atmosphere settling upon it, more particularly when, as is frequently the case, the plate is exposed in a sloping or horizontal position. The floating particles may, and often do, consist of minute crystals of pyrogallic acid, sulphate of iron, hyposulphite of soda, etc., caused by the different solutions being spilled or splashed about becoming dry and then being detached and wafted about as dust. Should any of *this dust* come into contact with the collodion film, myriads of spots must be produced; and it is noteworthy to remark that the spots recently complained of by our correspondent had a nucleus and a tail which was always in the direction (downward) the plate was exposed in.

We have on several occasions met with spots in negatives very similar in appearance to those referred to in collodion transfers; and, noticing that the "tail" of the spot always took the direction of the flow of the developer, we suspected *it* of being the cause, although it showed no signs of turbidity. It was filtered, and the spots disappeared. The same course was adopted whenever they again appeared, and this treatment always proved a perfect cure. There can be no question that if better materials were employed, and more time expended in the first instance in taking precautions to guard against failures in the collodion transfer, as in every other process, we should hear less of them, and in the end it would prove true economy.—*British Journal of Photography.*

A TRYING SITUATION.

(From the German.)



Photographer.—"Now, Captain, be careful to look only at one point, and quiet, please, right quiet; one, two, three—*thank* you!"

"TRAMPS."

By One of the Crowd.

Some of our fraternity seem to be so much embittered over the doings of what they are pleased to call the tramps of our profession, that I have thought that it would not be uninteresting reading to hear what one of them, at least, has to say for himself on the subject. And for fear that it may be surmised that we are not the thorough-going Simon pure article bearing that name, we will say that all we possess photographically is on wheels, and enclosed in the traditional twenty-four feet by eight car, with a little red-room, three by four, tacked on the side. This coupled with the fact that at any moment, when business is dull, all we want is the aid of four horses, or better still mules, and fair roads to "Fold our tent like the Arabs and as silently steal away." This, we think, entitles us to fairly class ourselves among the Ishmaelites of our profession.

How this has all come about, we can hardly say; we might wish it otherwise—perhaps envy, occasionally, the superb surroundings of some of our apparently more fortunate brothers, with their Dallmeyer lenses, their Seavey backgrounds, and their costly furniture.

But this feeling is hardly uppermost in our minds as we sit, this blustering evening in March, by the side of a cozy, hard-coal stove in what we are pleased to call the reception-room (nine by eight), of our what we heard a countryman call, Dagerrian box.

No, our thoughts are not of the envious kind to-night; for although we have had a hard run of work to-day, we take comfort in the fact that our bills are all paid, that we have no first of the month rent day, and no long salary list to liquidate on Saturday night. These are some of the comforts that we think balance the scale a little in our favor, and make us feel good-natured enough to give your subscribers a little insight into the way we accomplish all this, and yet be a tramp. In the first place, we read a little, especially photographic literature, and, without running amuck with all the new processes that are ever thought of, we always try and adopt any thing that we think has real merit, and try to keep in the lead with our best workers. For instance, it may startle some when we say that we don't take tintypes; that for six months we have used nothing but dry plates; that we use acetate of lead in the washing of our prints, and aniline blue in the toning of them; and, what is more, always charge (and get it, too) as much as, and in a great majority of cases more than, the best worker in the town that we see fit to drop down in. We do not wish it understood that all of this has come easy to do, or that we turn out as fine work as Rocher, Mora, Sarony, Ryder, and a host of others. That with our facilities would be impossible; but we do say that we always try to improve on the work with which we come into competition, and make better prices.

And now a word as to dry-plates. They were always a favorite of ours, for they were the companions of our youth twenty-five years ago. We wandered hand in hand with them in many a sunny spot of Old England, and the shadow of many a moss-covered abbey, and ivy-clad country church, was carried away by us on the albumen dry-plate of that day, and so it happened that the first gelatin plates in the market found us a ready purchaser. So pleased were we with our first negatives made with them (although by no means perfect), that we decided to adopt them, and to-day finds us altogether depending on them to work out the problem of a living.

The *modus operandi* we have adopted in our work differs slightly from the formulæ given by the manufacturers, but in every case in our hands we have found it reliable, (and we have used the plates of the four most prominent makers in this country,) and at the same time so simplifies the whole operation of developing, that the merest tyro cannot help but succeed if he will but jealously guard his plates from all but red light, and keep his developing dishes clean. My trays for that purpose are "dug-outs," made from inch-thick dressed pine and well coated with shellac, and to develop in them I proceed as follows:

Make two stock solutions, and label A and B.

A.—Pyrogallic Acid,	1 ounce.
Glycerin,	1 "
Alcohol,	6 ounces.
B.—Bromide of Potassium,	60 grains.
Liquid Ammonia,	1 ounce.
Glycerin,	1 "
Water,	6 ounces.

Both of these will keep well in stoppered bottles.

Now find out how much solution it requires to cover your different sized plates in their various trays, and for every ounce of solution take twenty drops by measure of both A and B; flood your plate with it, and watch carefully the result; if properly exposed, the image will begin to appear in about the same time that it does on a wet plate, and also in much the same order—first, high-lights, then details and shadows. Remember always that ammonia accelerates, bromide retards, and pyrogallic gives strength, density, and vigor; push the developing till the detail loses its sharpness, then wash well and fix in a twenty per cent. solution of hypo; if the result does not have sufficient of the "iron clad" about it, intensify according to directions given by all dry-plate manufacturers.

The above is all of my method, and I have found it easy, practical, and sure.

But it's growing late, and if my readers are not tired, at least my pencil-fingers are, and I will close with the wish that what I have written may help some brother to keep his work above the point that (to quote from Robinson's *Pictorial Effect in Photography*) makes it "a humbling sicht, indeed a sair sicht." If you think I have done so, Mr. Editor, why, call on me again, and in the meanwhile allow me to subscribe myself as "A TRAMP."

GERMAN CORRESPONDENCE.

New Photo-tracing Process—On the Action of Different Developers on Collodion and New Emulsion Dry Plates—The Carbonate of Sodium Developer—Influence of the Material of the Film on the Development—Edison's Tasimeter as Actinometer.

THE old, well-known iron-tracing process of Herschel, which is much used for reproducing drawings, has been much improved of late. If, according to Herschel, paper is coated with a solution of red prussiate of potash, one to ten, and oxalate of iron and ammonia, one to ten, and exposed when dry under a drawing. a negative copy in blue color is obtained, which, by washing with water, can be very easily fixed. The drawback of this process is, that one obtains a negative copy from the positive drawing, and, of late, different ways have been tried to obtain direct positive pictures. A method by Colas, in Neuilly, is interesting, as it gives positive black copies. The paper is coated with the following heliographic liquid:

Sulphuric Oxide of Iron,	10 grammes.
Chloride of Iron,	20 c.c.
Gelatin,	10 grammes.
Tartaric Acid,	10 "
Distilled Water,	300 "

and dried. It keeps very well if protected from the air. The drawing to be copied must be drawn in deep black lines upon thin oiled paper, or any other transparent material (photograph negatives), and is placed upon a pane of glass, which is fastened in a wood frame. Upon the drawing a piece of the prepared paper of the size of the drawing is placed, the sensitive side facing it. Glass and drawing are then fastened upon a wood plate, and exposed a few minutes in the sunlight. The green-yellowish color of the prepared paper vanishes, and only the spots which are protected by the black lines of the drawing keep their color. As soon as the ground of the paper appears white, the latter is taken from the glass plate and put in a bath prepared with 200 grammes gallic acid, dissolved in 20 grammes alcohol, and diluted in 1000 grammes water, whereby the green-yellowish lines become at once black. The sheet is then rinsed with water, and the reproduced drawing is now fixed.

Another recently published iron process of Pizzighelli, in Vienna, produces also positive pictures from positives.

According to Pizzighelli:

Gum Solution (1:5),	30 c.c.
Citrate of Iron and Ammonia (1:2),	8 "
Solution of Chloride of Iron (1:2),	5 "

are mixed, and this mixture becoming soon thick, it must be used at once. It is put on with a brush upon well glued paper and dried in the dark. The paper is lighted a few minutes under the drawing to be copied, then coated with a brush with a solution of one part yellow prussiate of potash in five parts water. The picture appears at once as a deep blue positive. When all details have been brought out, the picture is quickly rinsed with water and placed in a cup with diluted muriatic acid (one muriatic acid, ten water), whereby the ground of the picture becomes pure. The picture is then again washed and dried. The secret of the process consists in the formation of an insoluble combination of chloride of iron and gum, which stops up the pores of the paper, so that the picture remains on the surface.

In my last letter but one I called attention to the insensitiveness of the modern bromide of silver gelatin plates to the acid development. I conjectured then that the sensitiveness of the modern dry plates, perhaps, was owing to the propensity of the lighted parts to be easily reduced by the alkaline developer. In order to see clearly into this point, I lighted Vogel's emulsion plates simultaneously with collodion emulsion plates, equally long developed, both at the same time, with Nelson's developer. The experiment showed that, while the brightest lights in the collodion plates appeared sooner than in Vogel's plates, fog was formed very fast upon the former, while the latter developed slowly but perfectly clear, and showed by far more detail of shade than the others. This experiment proves that the collodion plates are not more, but less, affected by the alkaline developer than my emulsion plates, and this is the reason that it is necessary, in order to avoid fog, to use a much weaker developer for collodion plates than for gelatin dry-plates. With such weak developer I also experimented. I took as such:

Solution of Carbonate of Ammonia (1:5),	2.8 c.c.
Solution of Bromide of Potassium (1:4),	.6 "
Solution of Pyrogallic Acid,	.5 "
Water,	60 "

One of my emulsion plates and a collodion plate were lighted equally long (twelve seconds with stopped off objective upon a bust), and developed simultaneously in the aforementioned developer. First the brightest lights appeared upon the collodion plate, then the development showed no further progress; no trace of an effect was visible as yet upon the emulsion plate. Now, an equal portion of fresh developer of the same formula was poured in, and then only appeared the brightest light upon the emulsion plate; gradually, also, the shades, while the development did not bring out anything more upon the collodion plate except, finally, the film. This proves that one must not rate the sensitiveness alone upon the rapidity of the appearance of the picture, for upon the collodion plate the picture appears much more rapidly than upon a Vogel's emulsion plate, and yet the former is much less sensitive. Now, the possibility remained that the lack of sensitiveness could be the fault of the formation of veil, which disturbs the development, and in order to prevent this I coated the collodion plate with a solution of one part gelatin in five parts spirits of verdigris and fifteen parts of water. This solution dries forthwith. The plates referred to stood, now, the strong Nelson's developer without forming fog, so that the well-known veil-preventing effect of the gelatin was here proved to the highest degree. At the same time a material increase of sensitiveness was observed as compared with common collodion plates. Such collodion plates, coated with spirit of verdigris gelatin, were now lighted equally long as Vogel's plates and developed with Nelson's developer, with the result that while the light appeared much quicker in the collodion plate than in Vogel's plate, the development in the former remained then at a stand-still; while in Vogel's plate the development brought out gradually not alone the lights, but also the shades. This proves, therefore, that while the white bromide of silver of the collodion emulsion plate is materially easier reduced by the alkaline developer, it is, nevertheless, much less sensitive than the green, granulous bromide of silver of the modern emulsions. But as the effect of the light consists also in a reduction, we stand before a contradiction of the phenomena hard to solve.

I was interrogated the other day, by a correspondent, whether it was not possible to substitute an odorless substance, not spoiled in the air, for the strong-smelling ammoniac in Nelson's developer, which is disagreeable to the olfactories, and evaporates easily. This question prompted me to test the carbonate of soda, first tried by Dr. Eder upon collodion plates, as developing material. I prepared a solution of crystallized carbonate of soda, saturated at 13°—the same is obtained by pouring 100 c. c. water to 60 grammes simple carbonate of soda —and made with it the following developer:

Saturated Soda Solution, .	14 to 20 c.c.
Water, ...	60 c.c.
Pyrogallic in Alcohol(1:10),	5 "
Solution of Bromide of Potassium (1:4), ...	.6 "

This development was simultaneously tested with Nelson's sugar developer upon my plates, and I found that it is at least the equal of that latter developer in regard to rapidity and the bringing out of details, and superior, even, as regards intensity. The quantity of the soda may be doubled, even, and therewith the rapidity of effect of the developer. Unfortunately, the development has yet a defect; the plates are liable, when water is applied, to form blisters, and get detached, obviously in consequence of the endosmosis of the strong solution of salt. I could mitigate this only by not washing the plates after developing, but fixing at once. The blisters appeared then only in a very slight degree, and disappeared almost totally in drying. Still better, I avoided the frilling by pouring over the plates, after they had been developed, without washing them, a solution of nine parts alum and thirty parts cooking salt in one hundred parts water, when they bear washing and fixing without detriment. The curious part of this development is that it acts slower upon gelatin plates than upon Vogel's emulsion plates, while, *vice versa*, Nelson's developer acts quicker upon gelatin plates than upon the latter, and thereby once more an old observation of Lea is confirmed, namely, that the material of the film exerts a very material influence upon the development.

For a long time we have been searching for a serviceable actinometer, and it now seems as if the tasimeter of your countryman, Edison, would answer the purpose. Some time ago Mr. I. H. Hoorweg, in Holland, made some interesting observations about the ebonite of Edison's tasimeter. This apparatus consists, as you are aware, of an ebonite rod, fastened at one end, and touching with the other a number of pieces of carbon, through which a current of electricity passes. If the ebonite rod expands through any influence brought to bear upon it, it compresses correspondingly the pieces of carbon, whereby their electrical resistance is decreased, causing the needle of the galvanometer in the circle to deflect. The tasimeter is thus a highly sensitive thermometer. Mr. Hoorweg observed that the apparatus is also extremely sensitive to the light, much more so than a thermo-column, and made some comparative tests. He employed a Dubosq lantern, which was illuminated with either Drummond's calcium light or with gas-light, and furnished an intense light, which was concentrated through a lens once upon the tasimeter, and then upon a thermo-column of fifty elements. If, now, between lens and lantern a little cup with a solution of ammoniacal black oxide of copper was placed, so that only blue, violet, and ultra violet rays penetrated, the thermo-column indicated almost no current, while the tasimeter registered a deflection of 30°. If the liquid was increased from 1 to 4 cm., no current was indicated by the thermo-column, while the tasimeter showed a deflection of 15°. If the cup was filled with a solution of iodine in sulphuret of carbon (1 cm. thick), the thermo-column indicated a deflection of 30°, and the tasimeter 25°. Mr. Hoorweg let now the spectrum act in such a way upon the tasimeter that the ebonite rod was exposed in rotation to the red rays, and then to the blue rays, and obtained with the first a deflection of 10°, and with the latter a deflection of from 11° to 12°. The thermo-column, however, was quite unaffected in the blue and violet part of the spectrum. The ebonite possesses, therefore, the curious faculty of expanding as well, yes, even somewhat better still, by absorbing short ether-waves as under the influence of longer waves. If these data should be confirmed, Edison's tasimeter would prove to be the long looked for chemical photo-meter for registering the intensity of strong refrangible rays, *i. e.*, the most effective rays in photography, and the simplicity of the instrument would fit it for practical use in the studio. Very truly yours,

Dr. H. W. Vogel.

Berlin, April 30th, 1881.

SOCIETY GOSSIP.

Chicago Photographic Association.—A regular meeting was held at Douglass, Thompson & Co.'s warehouse, 229 and 231 State Street, on Wednesday evening, May 4th, 1881. Mr. Alfred Hall, President, in the chair. Meeting called to order at 8 o'clock.

On motion, the reading of the minutes of the last meeting was dispensed with.

A communication from Mr. H. Rocher, one of the Committee appointed at the last meeting to test the "Eureka" plates, was read by the Secretary.

Mr. Rocher writes: "In regard to the gelatino-bromide plates, 'Eureka' brand, which were handed to me yesterday by Mr. Douglass, I wish to say, that in the absence of a distinct formula for developing, I have tried Cramer & Norden's developer with good success, obtaining, at 8.30 A.M, a fully-exposed and vigorous negative in two and a half and three seconds; at 4 P.M., obtained the same good result. The first negative was made with a 3 B Dallmeyer, stop 2 X, the last with a French lens four-inch diameter, stop two and a quarter inches. At 2 P.M. to-day, with the last-named lens, and the same stop, I found a picture of a child, in a white dress, slightly over-exposed. Plates developed well and clean; fixing, however, took somewhat longer than with Cramer & Norden's plates. All print well. I am glad to say that we have now three good and reliable firms for the manufacture of these indispensable plates, all possessing merits of their own, and it will, therefore, be hard to give any of them the verdict of the best."

Mr. Gentile, another member of the same committee, being present, reported that he found one of these plates over-exposed in one second; time, 10 A.M.; cloudy; lens, 3 B Dallmeyer, 2 X stop; cabinet bust. He remarked, however, that part of the rapidity might be due to the fact that he was using a little hypo in his ferrous-oxalate developer. (On some member inquiring what proportion of hypo he used, Mr. Gentile said that his experiments were not in a sufficiently forward state to permit of his answering that question, but as soon as he had arrived at a definite conclusion he would communicate the result.

Mr. Gentile's negative was handed around for inspection, and pronounced fully timed, and of ample density; in fact, a good printing negative.

Mr. Edgeworth, the only "landscape" member of the committee, reported that he found the "Eureka" plates slow in exposure, development, and fixing; taking thirty minutes to fix in saturated solution of hypo. On the other hand, they worked very clean. He used ferrous oxalate. (It should be mentioned here, that the formula for development sent by the makers had been mislaid or lost by some one, and consequently no member of the committee had it to work from; and in the letter sent to the Secretary by the makers, advising him of shipment, special stress was laid on closely observing the formula for development.)

On motion, the report was accepted and the Committee discharged.

Mr. Douglass moved that a committee of three be appointed to represent this Society, with regard to the arrangements for attending the Second Annual Convention of the Photographers' Association of America, which will be inaugurated at the American Institute, New York, on Tuesday, August 16th next. The intervening time is none too long for the necessary preparation. There will be a large delegation of Western photographers passing through this city *en route*, and some one ought to be appointed on behalf of this Association to meet them and "do the honors" of the city; besides making, if possible, transportation arrangements from this point east, and a host of other matters requiring attention. We want some badges to distinguish us, and for all these details, it seems to me, a committee is required.

The motion was seconded by Mr. Greene, and carried *nem. con.* The Chair appointed Messrs. Alex. Hesler, Joshua Smith, and H. G. Thompson as that committee.

THE CHAIR.—There is a matter to which I would like to call your attention. I must confess that I came here to-night feeling a little blue. It has often been said that any official position without pay or emoluments attached to it, is a thankless one. Such, however, has not been my personal experience, although during the ten years or more during which this Association has existed, it has been my fortune to fill this chair three separate terms. It is true there have been occasional disagreements between some of the members and myself, and my motives have been sometimes misconstrued; but I have charged all this to the warped judgment of the individuals, and, serene in the consciousness that I was endeavoring to discharge my duties to the best of my ability, have held on in the even tenor of my way, confident that I had the good-will of the great majority of the members. Gentlemen, the interests and reputation of the Chicago Photographic Association have always been, and will always be, very dear to me; and therefore it was with a feeling somewhat akin to exultation that I read the eight pages or more occupied by the report of our last meeting in this magazine (taking up the last number of the *Photographic Times*). And when I reflected that the proprietors of this magazine had sent a special short-hand reporter, at considerable expense, to obtain that report, I felt that at last we were getting appreciated; in the classical language of Sir Joseph Porter, K.C.B., "My bosom swells with pride." But, alas! my pride was destined to a speedy humiliation. Turning back a few pages in the same publication, I find an article, written by one usually supposed to be an authority on such matters, who has conducted a leading photographic journal for many years, and who, *professedly*, has the best interest of photography at heart,—this article states that there is not a photographic society—not even excepting the Photographers' Association of America—in existence worthy of the name, and advises the photographer to have nothing to do with any of them. This article I have read and re-read, in the hope of being able to find out whether it was written in jest or earnest; if a jest, it is a serious one; for there are, probably, very few photographers, in or out of societies, who will be able to see where the joke comes in; if in earnest, it behooves us to inquire into the matter, and see what grounds the gentleman may have for "the faith that is in him," (?) and should we find that he has stated the case truly, the sooner we disband the better. We are only wasting our time by meeting here.

There is only one reason that inclines me to think the matter a joke, viz., if the proceedings at our meetings are a waste of time, why does he fill up a large part of his valuable (?) space therewith every month—space for which he charges his subscribers five dollars a year? In conclusion, let me hope that you will all read and study this article, and that, if the castigation is merited, it may, like bitter medicine, produce some beneficial results.

The "lion" of the evening, Professor H. D. Garrison, M.D., was now introduced by the Chair, and spoke substantially to the following effect, although, as the Secretary has to rely on his memory to a large extent, the Doctor must excuse any inaccuracies that may have crept into this report:

Dr. Garrison's Lecture on Chemistry.

"It seems to me, as doubtless it does to many of you, that it is scarcely in order for me, who have merely dabbled occasionally as an amateur in the art-science of photography, to lecture to a lot of men whose daily occupation it is, and many of whom have grown gray in the business, on any branch of that subject. But it happens that I have had, perhaps, better opportunities than most of you of studying some special features of photography, because in my young days it fell in my way to study chemistry—I studied it because I liked it—and I found that the operations of photography are simply chemical operations—although in this I do not imagine that I am imparting any news to you—and therefore it occurred to me that possibly I could clear up for you some matters that are stumbling-blocks to many photographers, especially now that gelatin is coming so prominently to the fore, with its peculiarities of working, and its special difficulties, in grappling with which the experience gained in many years of wet collodion can render you little help.

"Now there is a very prevalent idea amongst those who have never studied it, that chemistry is all theory, and of little practical use. But, in fact, in this, as in most other fields of study, theory and practice go hand in hand. If your theories are good, they will pan out all right in practical working; if bad, your practice will correspond. The people who have the greatest contempt for theory are usually those whose individual theories are faulty. I once knew an old gent who had a theory that because ether was extracted from alcohol, it was practically the same thing, and that whatever was soluble in one must be in the other. It is scarcely necessary for me to add that this old gent was an uncompromising opponent of theory in general.

"Then there is another misapprehension about chemistry that I would like to correct, viz., that it is a difficult science to acquire. Now, the difficulty in this case, as in many others, arises from beginning at the wrong end. If you commence at the beginning, you will get along all right. If you wish to learn arithmetic, you must commence by learning your figures, and just so in chemistry.

"I will not deny feeling a little embarrassment in addressing you, for fear I may not succeed in making myself understood, and will, therefore, be a little more elementary than may seem necessary to those who already possess a rudimentary knowledge of the subject. But, if possibly falling into this error, I will at least avoid the opposite one of talking above your understandings—a favorite device with some lecturers, by the way. Probably most of you have heard how Daniel Boone, who, when he first heard Webster speak, was asked what he thought of the great man; 'Pooh!' said he, 'call him a great speaker? Why, I understood every word he said!' It is a not uncommon fault with lecturers on chemistry to pitch their discourses in too high a key for the understandings of their audience. But let us proceed to business.

"Amongst the first substances to claim the chemist's attention, are a class of bodies called 'halogens,' and with these, or some of them, the photographer has, directly or indirectly, a great deal to do. There are five of them, which I will write here somewhat in the order of their strength, with their chemical symbols:

Chlorine,	Cl.
Bromine,	Br.
Iodine,	I.
Fluorine,	F.
Cyanogen,	Cy.

These are all, except cyanogen, what chemists call 'elements,' of which at present we recognize sixty-five. The name means that they cannot be separated into two or more substances. If any one should succeed in so separating any of these sixty-five elements, it would thenceforward be struck from the list, and considered a compound. Now, all these elements have certain points in common; that is, they all obey certain fundamental laws. For instance, they will only unite with each other in certain definite proportions. You may mix them in any proportions you please, but each will take to itself just its definite proportion of the other, and the remainder will be in its original free state. You may add a drop of sulphuric acid to a pailful of water, and it will diffuse itself equally throughout it, and a chemist can detect sulphuric acid in every drop of that water; so you might take a gallon of acid to the same pailful of water, and it would mix as before, only, of course, being vastly 'stronger' in acid; but this is a mechanical mixture—a very different thing from a chemical combination; in the latter, there is no such thing as 'weaker' or 'stronger;' the sulphate of iron you use for developing will contain just so much iron to so much sulphur, and if you try to increase the quantity of either you will, undoubtedly, fail to do it. So, 108 grains of pure metallic silver will combine with exactly 35½ grains of chlorine to form chloride of silver; if you take 109 grains of silver to 35½ of chlorine, one grain will be left uncombined. Now this law of combination in certain definite and unvarying proportions, is one of the great beauties and certainties of chemistry. Let me try and explain the theory of it to you. Everything in nature is supposed to consist of atoms. What is an atom? No one knows; certainly no one has ever seen, or is ever likely to see one. If a drop of water were magnified to the size of this globe on which we live, the individual atoms in it would hardly appear larger than buckshot. The expression is simply a convenient one for the minutest particles into which any substance is supposed to be capable of division. Now, however small these atoms may be, they must have weight, and, being all of one size, while the elements of which they form the component parts vary greatly in weight, it is evident that the weight of an atom of one element cannot be, except by accident, the same as that of another. And this is the meaning of the term 'atomic weight.' Now, as it is obviously impossible to determine the absolute weight of any atom, chemists have settled on a system which shows their *relative* weights; and, as hydrogen is the lightest known element, it is taken as the standard, and called unity; thus the 'atomic weight' of hydrogen is 1.

"All the elements combine in the proportion of their atomic weights, so that if you wish to combine any of them, it is merely necessary to consult a table of atomic weights, which shows at a glance the correct proportions by weight. Having combined your atoms thus, the sum of their weights will be the molecular weight of the compound. To give an illustration: our friends Douglass and Thompson here decide to form a partnership. Say D. weighs 160 and T. 150. $160+150=310$, which would be the 'molecular weight,'—or 'firm weight' in commercial parlance. Should they subsequently take a notion to admit me into the firm, they would have a partner with an atomic weight of about 200, and the 'molecular weight' of the concern would thus be 510. Just so in chemistry; the *molecular* weight of any compound substance is the sum of the *atomic* weights of its individual elements.

"But let us return to our muttons—*i. e.*, the halogens. We shall find that they have many characteristics in common. For instance, all have a great affinity for hydrogen (chlorine and hydrogen, in proportion of their atomic weights, $35\frac{1}{2}+1=$ hydrochloric acid, molecular weight 36½). All have a great affinity for potassium, and all form with it compounds soluble in water, and which crystallize in cubes; all of them form white, or nearly white, compounds with silver, insoluble in water; and many other points of resemblance might be pointed out. Fluorine we know less about than any of the others, it never having been seen in its simple state; but with some of its compounds we are tolerably familiar—hydrofluoric acid, *e. g.*—and from them we can form some idea of its properties. Probably it is a gas, similar to chlorine. Let me write some of our friends again, with their atomic weights and chemical symbols:

Chlorine (Cl) = 35½.
Bromine (Br) = 80.
Iodine (I) = 127.

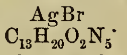
These are the ones with which you have most to do.

"Now, you want to know how to apply this information to your every-day work. I will show you. You want to know, for instance, how much of any given bromide it will require to saturate a definite proportion of silver. Take bromide of potassium, for instance; consulting your table, you find the atomic weight of potassium (K) $= 39$ and bromine $= 80$. $80 + 39 = 119$, molecular weight of bromide of potassium (KBr). It may be as well to remark here, that it is the rule, in giving the symbol or formula for any compound, to place the metal first; no particular reason for it, only it is the fashion, and we have to follow the fashion in chemistry as in other matters. Now, nitrate of silver has the formula $AgNO_3$. Wherever you see a figure below, like this $_3$, you will know that you have to take three atoms (or whatever the figure is) of that element; atomic weight oxygen (O) $= 16 \times 3 = 48$; nitrogen (N) $= 14$. Therefore molecular weight of $AgNO_3 = 170$, and this number you will find opposite it in the table. Therefore, you must take 119 grains (or ounces, or whatever your unit is) of KBr to 170 $AgNO_3$, and in this proportion they will combine without any remainder; in any other, the surplus, of whichever it may be, will remain free and uncombined in your solution. The change that takes place may be graphically expressed thus: $\begin{array}{c} KBr \\ \times \\ AgNO_3 \end{array}$ —the bromine and silver form a new combination, AgBr; and the potassium forms another with nitrogen and oxygen, $KNO_3 =$ nitrate of potash. Again, you wish to know which of any two or more bromides is richest in bromine. You find that bromide of potassium, as we have shown, contains 80 parts in 119 of the salt; bromide of sodium (NaBr), molecular weight 103, contains 80 in 103; therefore it is richer than the potassium salt; now bromide ammonium $= NH_4Br$. Now here we have, in ammonium, a substance which behaves very like an element, and yet we know it is a compound substance, as the above formula shows. Now, $NH_4Br.$, $14 + 4 + 80 = 98$ molecular weight. So we have 80 parts bromine in 98 of the salt—still richer than the sodium salt; probably the reason why this salt is so generally preferred for gelatin work. If you wish to use this salt for making gelatin emulsion, and wish to exactly convert all the nitrate of silver, without leaving any free bromide in solution, you will have to take 98 parts of ammonium bromide to 170 silver nitrate. Here again is what happens:

$$\left.\begin{array}{c} AgNO_3 \\ \times \\ NH_4Br. \end{array}\right\} \text{results in} \left\{\begin{array}{c} AgBr \\ NH_4NO_3 \end{array}\right.$$

"As the title of this lecture has been announced as 'The Chemistry of the Gelatino-Bromide Dry Plate,' perhaps it may be as well to say a few words about gelatin itself. The name is a vague expression for various substances possessing a strong family resemblance. We speak of gelatin, albumen, gluten, glutin, casein, etc. Gelatin you know in the various forms of glue. Its color varies with the purity or impurity of the materials from which it was made, the method of manufacture, etc. Commercial gelatin is usually made from hides, which are cut into strips, boiled, the resulting mucilaginous fluid allowed to cool and gelatinize in sheets, when it is spread on wire-cloth frames to dry. The thinner these sheets, the whiter it will look; so that it may easily happen that, of two kinds, the darker may be the purer, the other owing its light color to its thinness.

"It is a good deal the custom to mix bones in with the hides in boiling, or boil them separately and mix the products afterwards in order to get the benefit of the cartilages and tendons, which make what is called 'chondrin,' an article damaging to the quality of the gelatin with which it is mixed, but, unfortunately, the commercial gelatin contains a good deal of it. Probably this might represent about a fair average sample of gelatin, $C_{13}H_{20}O_2N_5$, with, perhaps, an atom of sulphur. Now, there is nothing in the above formula that should remain as ashes after burning, but as a matter of fact, most gelatin contains more or less lime, which is, of course, incombustible.

"Perhaps you expected to hear to-night the reason of the peculiar effect of gelatin in emulsion; why it is that it is so much more sensitive than collodion. Well, I can probably tell you as much on that head as any one else, and that is very little. In fact, no one yet knows anything about it; various theories have been advanced, but they all lack proof. I have an idea that the large amount of hydrogen in its composition may have something to do with it. We have seen that bromine, in common with its relations, the other halogens, has a great affinity for hydrogen. The way in which chlorine acts as a disinfectant, is by combining with hydrogen—as in sulphuretted hydrogen—thereby leaving the sulphur free, in which form it is harmless. By combining with gelatin, chlorine utterly destroys it, by taking up the H in its composition. Now bromide of silver in gelatin would be something like this,  $\overset{AgBr}{C_{13}H_{20}O_2N_5}$. Now some of the H may combine with some of the Br, setting free silver—Ag.

"We have a theory about the action of light on silver bromide which I will try to explain to you. Each atom of any element is supposed to be a 'monad;' that is, it can only engage with one other atom at one time; to use a simile, it has only one hook; so that when two atoms are locked together by their hooks, neither of them can hook on to another atom. There is a theory, however, amongst some chemists, that these atoms may possess other hooks, folded up, as it were, and useless under ordinary circumstances; but that, let them come under some special influence, these dormant hooks are spread out, and then they can engage with several atoms at once. Something of this kind may happen in a gelatin plate exposed to light. It is certain that the action of light produces some effect on the molecules of silver bromide; and it may be that an atom of Ag having, say, two dormant 'hooks' released, seizes two atoms of Br in addition to the one it is already combined, or 'hooked' with, and that the Ag given up by these two atoms of Br combines with the gelatin. Or, the H in the gelatin may have taken two atoms Br, leaving three atoms Ag for the other atom of Br, thereby forming a new species of silver bromide. Something analagous to this must result from the action of light.

"Lastly—for it is getting late, and I fear you are getting tired—a few words on what *must* happen during development. Developers are all alike in the theory of their action, whether acid or alkaline, whether for wet or dry plates. The common characteristic of all developing agents is their eagerness for oxygen. Take as an example the one with which you are most familiar—sulphate of iron. The acetic acid we may leave out of consideration, as it is merely a restrainer. Sulphate of iron, then, $FeSO_4$, has an enormous appetite for oxygen, will take it from the air, if it can get it from nowhere else—witness the brown incrustation that forms on crystals of this substance when exposed to air, and the brown sediment in your developing solution. It has a constant tendency to pass from the 'ferrous' to the 'ferric' state. But, say you, where is the O in AgBr? True; but there is plenty of it in the water with which your developer is mixed; only it can't get at it, because the O has a stronger affinity for the H in the water (H_2O).

"Well, we have repeatedly seen that Br has a strong affinity for H, and this, coupled with the affinity of $FeSO_4$ for O, proves too much for the cohesion of the H and O, part of the latter going to the iron salt, and part of the former to the bromine, leaving Ag free. But, it may be objected, why does not the silver settle equally all over the plate? Because, by the action of light, it has already commenced to settle on certain portions, and these form *nuclei* of attraction for the remainder. If we use no restrainer, you know very well that the silver will precipitate all over, causing 'fog.' With ferrous oxalate the action is precisely similar; and the same law holds good with pyro, whether used acid, as in wet work, or alkaline, as in dry.

"But I have taken up quite enough of your time; there is a vast field in this subject, and I did not hope to more than touch on the outskirts of it. It is one of the great beauties of chemistry that you can predict with certainty the result of certain causes; or, conversely, if you want to produce a given effect, you know that certain agencies will infallibly accomplish it. Thus, in mercurial intensification, we know that chloride of mercury ($HgCl_2$) (corrosive sublimate) will, when poured on to a silver image, produce calomel (subchloride, Hg_2Cl_2), a whitish substance, and that this can be changed into the black oxide of mercury by ammonia; we know it, for we have seen the effect in a test-tube. Also, we know that too much ammonia will dissolve off this oxide, for oxide mercury is soluble in excess ammonia."

Mr. Greene.—What is your opinion of the permanence of mercury intensified negatives?

Dr. Garrison.—I do not consider them stable. It may be all well enough as long as they are protected from light, but this agent will gradually decompose the mercury salt. We know that a jar of calomel left in the light, will gradually precipitate metallic mercury, forming corrosive sublimate.

A brief but somewhat animated discussion ensued between the lecturer and Mr. Joshua Smith, as to whether a negative could be developed with sulphate of iron without free silver being present; the former maintaining that it could, for he had done it himself; and the latter that it could not. Neither disputant seemed inclined to change his original opinion.

On motion of Mr. Gentile, a vote of thanks to the lecturer was passed.

Mr. Greene remarked that the notices of the meeting announced that he would continue his observations on changes in proportions of pyro developer; but, owing to the lateness of the hour, he would postpone it to the next meeting.

On motion, adjourned.

F. H. Davies,
Secretary.

Boston Photographic Association.—The monthly meeting of the Society was held at the rooms of the Secretary and brother, 2832 Washington Street, Boston Highlands, Wednesday evening, at 8 o'clock. The studio was built by its occupant for photography and its branches, and is snugly located; the operating- and reception-rooms being on the ground floor, with a two-story L in the rear, the lower story of which is used for silvering, toning, and washing, making over baths, preparing chemicals, etc. In the upper story contact and solar printing is done, and negatives and stock are stored. The operating-room is arranged so that both ends may be used; the light is a north one and of clear glass, is fourteen feet long, ten feet high, and pitches at an angle of 45°, coming within four feet of the floor. The general color of the operating-room is a light drab, and the room not being very large, a reflector is not always necessary. The backgrounds are arranged very simply; there is but one large frame, which is 8 x 10 feet, covered on one side by an interior, on the other by an exterior. All other backgrounds are kept on rollers, with the roller tacked at the bottom and a button attached to the top. These are kept standing on end in a convenient corner. When a ground is wanted, the button is hung over some hooks on the top of this 8 x 10 frame, and the ground allowed to unroll; the advantage of this is the great saving of space in the operating-room, which is not unfrequently overcrowded. One material thing in the reception-room was the non-appearance of the counter and show-case, which is almost always seen in other galleries. Specimens are shown by means of albums and frames on the walls and easel; this gives more the appearance of a studio and less that of a store. After the rooms had been looked over and the objects of interest explained, the President, Mr. E. J. Foss, called the meeting to order, and the minutes of the last meeting were read and accepted.

The President suggested that some means be taken to limit the number of pictures or frames to be exhibited by each photographer at the Massachusetts Charitable Mechanics' Association Fair, which is to take place next fall in the building now being erected on the back bay. Mr. Lovell of Amherst, Mr. Bowers of Lynn, and Messrs. Black and Burnham of Boston, spoke of the unfair way in which the photographers had been treated by the supervisors of the fairs in the past, sometimes allotting the basement and sometimes the attic for the exhibition of the production of the photographic art. Mr. Burnham moved that a committee of two, to consist of J. W. Black and the Secretary, be appointed to interview the proper officers of the fair, and ascertain what advantages they will give the photographers if they will exhibit, and report at the next meeting; this was seconded and passed.

Mr. Benjamin French presented the Society with four handsomely bound volumes of the St. Louis *Practical Photographer*, which can be borrowed by members for one month at a time, to be kept run of by the Secretary. A unanimous vote of thanks was given Mr. French for his present. The meeting was adjourned, and the Secretary placed on the table a pile of cabinet photographs, and invited the gentlemen to select one each as a souvenir of the evening.

About twenty-five photographers were present. W. H. Partridge,
Secretary.

Association of Operative Photographers of New York.—The regular meeting was held in Beethoven Hall, April 20th, 1881, the President in the chair.

An amendment to the By-Laws, submitted by Mr. Hendrickson, and calling for the election of a Corresponding Secretary, came to its third reading and adoption by vote. In consequence, Mr. William McLoughlin, of 125 S. First Street, Brooklyn, E. D., was elected. It is his duty to receive all written communications and answer them. The reports to photographic periodicals, not represented by special reporters, will be conducted by the Recording Secretary.

Mr. Th. Walker, the President, resigned. The Vice-President, Mr. Coonley, was elected President, and Mr. Atwood Vice-President.

The London *Photographic News*, the *Philadelphia Photographer*, Anthony's *Bulletin*, and the New York *Photographic Times* were received with the thanks of the Association.

Of gelatin suitable for emulsion processes, Mr. Ehrmann stated that bones of mature animals only can produce a good gelatin. Cartilaginous substances will give chondrin, a modification of glutin, which, although nearly alike in its chemical composition, differs greatly in its properties. Glutin will not be precipitated by alum, the salts of copper, or iron and silver. Chondrin with hartshorn, being free from cartilage, is likely the best material for pure gelatin. Isinglass or fish-glue, made from the sounds of Aceipensor, Sturio, Gadres, Marsena, and other fishes, he has never experimented with.

Mr. Duchochois, after giving an outline of the methods by which gelatin is made, indicated the qualities required for photographic use. That which is less soluble possesses greater resistance, and forms a grain. It sets rapidly, but the film, when thick, is liable to dry unevenly. The more soluble the gelatin the finer the grain, but it frills easily. For emulsion work, as well as for engraving purposes, the best gelatin to employ is that which, after being soaked, will alter its shape as little as possible. The gelatin made from the skins and other soft parts of young animals absorbs much water and spreads considerably. The quality imparting permeability is very tenacious, and produces a fine grain in the emulsion.

The gelatin of commerce is more or less impure, owing to its mode of manufacture. It is clarified, but not purified, by soaking it in repeated waters, thus dissolving it; adding acetic acid, and skimming it while heated, with the whites of eggs.

Subject for next meeting: "The proper quantity of iodide of potassium in collodion." Adjourned.

Another regular meeting was held May 4th, 1881, the President in the chair.

Among the usual correspondence appeared a letter from Mr. G. A. Douglass, the Secretary of the Association of Photographers of America, calling upon this Association for co-operation at the annual convention to be held in this city on August 16th, 1881. The Association will render cheerfully all aid and assistance in its power, and appointed a committee, consisting of Messrs. Hallenbeck, Atwood, and O. Bishlor, to confer with Mr. Douglass and the local Secretary.

"What is the proper quantity of iodide of potassium in collodion?"

Several members participated in the discussion of this subject. The conclusion they all came to was simply this: Alcohol will only dissolve iodide of potassium to a small extent. The stronger the alcohol the less it will dissolve of it, and keep in solution. An alcohol containing more water will dissolve more. The addition of ether to a solution will precipitate that part of iodides which cannot be held in solution, only the alcohol retaining the dissolved salt.

Subject for next meeting: "Retouching of negatives." CH. EHRMANN,
Secretary.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—The stated meeting of the Society was held at their room, No. 520 Walnut Street, on May 6th, 1881, the President, Mr. Joseph W. Bates, in the chair. The minutes of the last meeting were read and approved.

The Room Committee reported that the portrait of Mr. Fox Talbot had been suitably framed.

Dr. H. M. Howe was unanimously elected to membership, Messrs. Castner and Davids acting as tellers.

Mr. Tilghman sent for exhibition a number of prints from gelatin negatives made by a friend during a trip through Tunis and Algiers, which were interesting, as showing the costumes and architecture of those countries.

Mr. Carbutt exhibited a number of very fine 11 x 14 and smaller views by Mr. W. H. Jackson, of Denver, of winter scenery on the Denver, South Park, and Pacific, and the Denver and Rio Grande railways; also a number of prints by the photographer of the Howgate exploring expedition. The negatives of all were made on the Keystone gelatin plates.

Messrs. Wilson, Hood & Co. sent to the Society for examination a number of cameras, lenses, and other apparatus, designed expressly for amateur dry-plate work. These were examined by the members with great interest. Among the novelties shown were improved developing-trays, ruby-glass lantern, and dropping-bottles. The cameras were of the American Optical Company's make, and eminently adapted for the purposes intended.

A number of pictures having been sent to the Society, the President appointed Messrs. Graff, Craig, and Carbutt a committee to select therefrom the two most suitable for presentation pictures. A recess was now taken to allow the committee to decide, after which they reported that they had selected "A View on Poquessink Creek," by Mr. Fox, and "A Timbered House at Bayend," by Mr. Wallace.

Mr. Wallace read an extract from the *British Journal of Photography* of March 11th, relative to the shape of a plate covered by a given lens, in which the author claimed that, by altering the proportion of length and breadth of a plate, the lens could be made to cover larger angles. That is, a lens covering a 10 x 12 plate would cover equally well one 8 x 15, which would give a much greater angle of view on the long dimension. The great objection, the speaker said, to the latter shape of plate, was the fact the want of definition at the ends would be more conspicuous than in a plate more nearly square, as in that case it would come at the corners and not be noticed.

Relative to focussing on dark interiors, Mr. Bell stated that his plan was to use a lighted candle, which could be moved from point to point, and thus enable him to focus on any desired part.

During a discussion on the best method of eliminating hypo. from paper prints, Mr. Hewitt suggested that a weak solution of iodine in water would effectually accomplish that end.

Mr. Samuel Sartain exhibited an ingenious form of "view-meter," consisting of a movable wire frame, of the size and shape of the plate to be used, mounted on a wire rod, the end of which was bent into a circle so as to form an eye-piece. By moving the frame on the rod to suit the different foci of the lenses employed, the operator is enabled to see at once the exact amount of subject in his picture without resorting to the camera.

A letter from Mr. Barrington, chairman of the excursion committee, was read, in which he stated that, owing to the inability to procure a suitable boat, the trip up the Hudson would have to be abandoned.

On motion of Mr. Browne, the Secretary was instructed to call a special meeting on Thursday, the 12th inst., to consider the subject of the annual excursion and decide upon a route.

After examining a few lantern slides, the meeting was on motion adjourned.

C. R. PANCOAST,
Secretary.

THE PHOTOGRAPHIC ASSOCIATION OF NASHVILLE, TENN.—At an impromptu meeting of the photographers, it was decided to form an Association, to be called the Photographic Association of Nashville. Mr. F. J. Quimby was elected Chairman, and Mr. O. B. Giers, Secretary, *pro tem.* The meeting adjourned to meet at the Maxwell House on Wednesday, April 13th, 1881.

Met at the Maxwell House, Wednesday, April 13th, 1881. The meeting was called to order by the Chairman, Mr. Quimby, who explained the object of the meeting, and called on the members present to express their views. It was decided that the object of the Association should be for the advancement of photography. The following persons enrolled their names as members: W. J. Root, C. D. Baugh, W. S. Mahon, E. E. Barnard, S. A. Taylor, W. G. Thurs, Walter Corbitt, James R. Harman, Chas. Robertson, A. P. Overland, F. S. Sloan, Mark Reisman, James S. Patterson, F. J. Quimby, Otto B. Giers, T. M. Schleier, and E. Koellien.

The following officers were elected for the ensuing year: President, James S. Patterson; First Vice-President, F. J. Quimby; Second Vice-President, Charles Robertson; Treasurer, W. J. Root; Secretary, Otto B. Giers. A committee was appointed to prepare rules and regulations for the government of the Association. Moved and seconded that the Association, at the next meeting, discuss any subject bearing on photography, the subject to be suggested by the President. The Association adjourned until Thursday, April 21st, 1881, to meet at the same place.

Met at the Maxwell House, April 21st, 1881. The Association was called to order, with President Patterson in the chair, and the minutes of last meeting read and approved. The following new members were admitted: E. Calvert, C. R. Calvert, A. T. Yearout, V. C. Rhine, and J. Herstein. The committee on rules and regulations submitted their report; after discussion the constitution and by-laws were adopted. The President appointed Messrs. E. Calvert, Overland, and Thurs as a committee to secure a place for the next meeting. Moved and seconded that the Association adjourn until the first Thursday in May, to meet at the place selected by the committee; the members to be notified by the Secretary. The Association adjourned.

Met at the Association rooms Thursday, May 5th, 1881. The Association was called to order, with President Patterson in the chair, and the minutes of the last meeting read and approved. The following honorary members were elected: John A. Roach, A. Larcombe, Dr. George S. Blackiè, Prof. N. T. Lupton. The President appointed Messrs. Quimby, Koellien, and C. R. Calvert as a standing committee to advise him in any business that may come up between meetings. The President announced that the subject for discussion would be postponed until next meeting, to be held the first Thursday in June, the subject to be "Failures." The Association adjourned.

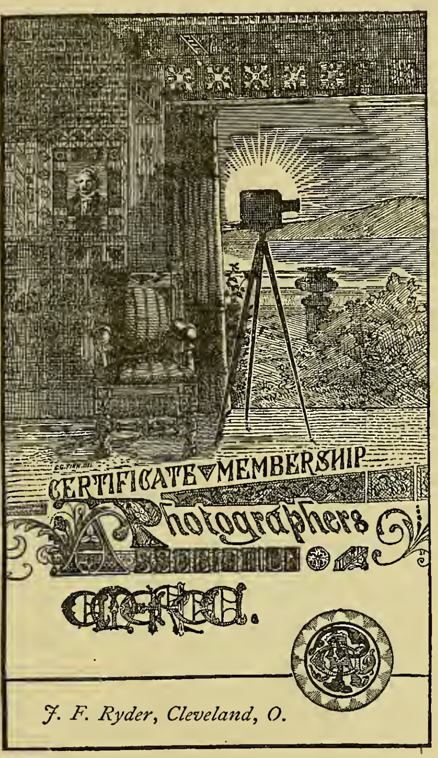
PERTAINING TO THE

ONLY two months more, and then you will be looking out for low rates of fare to New York, for attendance upon the Convention.

From the inside view we are permitted to have, we believe it will be a most instructive, educating, practical affair, if the determination of the Excursion Committee can so contrive. They are doing their very best. By all means therefore prepare to go, *and go.*

Let some of your best work be shown, and, if you know anything useful, prepare to say it—well boiled down—and help on with the good work.

The Executive Committee are preparing a very handsome certificate of membership, a reduced photo-engraving of which is given below:



The original design for the certificate was drawn in pen and ink by Mr. G. G. Finn, Cleveland, Ohio, and is a real gem in its way. It is full of suggestions of the studio photographic, and a real work of art. Mr. Finn is recommended very highly, too, by Ex-President Ryder, as being exceedingly skilful in getting up artistic designs for photographic cards, circulars, etc., and photographers will be glad to avail themselves of his artistic services, undoubtedly. He designed the certificate at less than half price, and we hope it will bring him much patronage. A full description of its size and form will be given presently by the Committee. It will honor every one entitled to display it.

With customary enterprise, the Crosscup & West Wood and Photo-Engraving Company have made various sizes of it for disposal to members of the Photographers' Association of America only, who cannot afford an original design for use on the backs of their card-mounts.

It will be a beautiful thing for this purpose, and become very popular. See the advertisement.

Whatever you do, do not miss the 1881 Convention of the Photographers' Association of America.

Secretary Douglass made his "annual announcement" in our last issue, which please read. A further one will follow soon, giving a partial programme and lists of the railroad routes by which reduced fare may be had. Look out for it. Join the Association *now*, and don't wait until you reach New York, and then have to lose one or two meetings before you can get a chance in the crowd to become a member. Mr. Douglass asks the co-operation of everybody in the matter of securing low rates of fare, and to arrange excursions from various points. Please communicate with him. He is also inviting some of our best talent to co-operate in the educational department of the Convention work, and has favorable promises from a number. He says:

"A studio with models for demonstrations in 'lighting' and 'posing' will be provided for those who will interest themselves in this branch of photography. Half-hour essays and ten minute 'talks' on photographic topics are desired."

Do not fail to take hold, and now.

The Committees on Life Insurance, Dry Plates, and the Progress of Photography, are expected to have fine reports.

TIME TO PAY OUR DUES.—

OFFICE OF SECRETARY, 229 and 231 STATE ST.,
CHICAGO, May 20th, 1881.

The time for payment of Annual Dues has arrived, and we trust you will be prompt in sending the same to A. Hesler, Treasurer, 96 State Street, Chicago, Ill.

"Every member shall pay his dues in *advance* annually, June 1st, into the hands of the Treasurer, and will lose his right to membership by neglecting to pay such dues."—*Art. II, Sec.* 4, *of By-Laws.*

Dues: Employer, $2.00; employé, $1.00.

Fraternally,
Gayton A. Douglass,
Secretary.

APPROACHING.

A little more than ten weeks remain before the Convention. Are you preparing for the occasion? Have you secured your membership, and notified the Secretary that you intend to go? Are you getting your exhibit in shape, and have you written the local Secretary, Mr. L. W. Seavey, that you want room? Do not put off these duties, but act at once, and greatly lighten the labors of the officers. We have said all that is necessary regarding your duty towards the Association, and trust our invitations have not been in vain. It only remains now to report our progress and urge promptness in your plans. Everything is being done by those appointed for the duty to make the Convention what the fraternity expect and desire, and they only need your support to make the affair complete. The programme is assuming form, and promises to be rich in practical articles and demonstrations. Circulars of invitation are out to all in our profession that are noted for progress, and responses are coming in saying they will join in the good work. Manufacturers, dealers, and those having specialties for photographers, are applying for space, showing that the exhibition in the line of requisites for the art-science will be large and complete, a feature that will attract the favorable notice and study of the fraternity. Very shortly it is expected to arrange and publish, for distribution to all the photographers in America, a detailed exhibit of the Convention matters. Its programme, transportation rates, location of hotels, with cost of accommodations, and all information that will be thought valuable and necessary for those intending to be present. The following names have been added to the membership since publication of list in the announcement, and each day brings an addition. The following added to those already published, shows the membership up to May 20th: Geo. A. Eastman, Rochesteo, N. Y.; C. E. Sargent, Hamilton, Ohio; Well G. Singhi, Binghamton, N. Y.; Theo. Semmendinger, Fort Lee, N. J.; Hermann Norden, St. Louis, Mo.; R. F. Elliott, Georgetown, Col.; Wm. H. Allen, Detroit, Mich.; Orville C. Allen, Detroit, Mich.; A. M. Allen, Pottsville, Pa.; J. J. Garvin, Pottsville, Pa.; E. H: Perry, Battle Creek, Mich.; Abm. Bogardus, New York, N. Y.; A. B. Comstock, Waverly, N. Y., C. A. Stacey, Lockport, N. Y.; John G. Hood, Philadelphia, Pa.; Wm. D. H. Wilson, Philadelphia, Pa.; J. H. Warrington, Atlantic City, N. J.; Chas. T. Stuart, Hartford, Conn.

Eighteen new members. The name of H. E. Noble, Lincoln, Neb., was omitted from the list in announcement, which makes nineteen to be added to the published 332, making a total of 351, and more coming. To show the fraternity the interest of those who serve them with their supplies in the educational work that the Association is striving to accomplish, we give the following list of generous contributions to our treasury:

A. M. Collins, Son & Co., Philadelphia,	$100.00
Benj. French & Co., Boston, Mass.,	100.00
Scovill Mfg. Co., New York,	100.00
E. & H. T. Anthony & Co., New York,	100.00
Lafayette W. Seavey, New York,	50.00
G. Gennert, New York	25.00
L. Pattberg & Co., New York,	25.00
J. F. Magee & Co., Philadelphia,	25.00
J. A. Anderson, Chicago,	25.00
Douglass, Thompson & Co., Chicago,	25.00
H. J. Thompson, Chicago,	25.00
Wilson, Hood & Co., Philadelphia, Pa.,	25.00
J. C. Somerville, St. Louis, Mo.,	25.00
Chicago Refining Co., Chicago,	20.00
Gatchel, Hyatt & Mullett, Louisville,	20.00
Gatchel & Hyatt, Cincinnati,	20.00
Gatchel & Hyatt, St. Louis,	20.00
Frederick Mullett, Kansas City, Mo.,	15 00
J. W. Bryant, La Porte, Ind,	20.00
S. H. McElwain, Chicago,	10.00
Ross & Brown, Chicago,	10.00
G. Bode, Milwaukee, Wis.,	10.00
Bachrach Bros., Baltimore, Md.,	10.00
C. Stange, Chicago,	10.00
D. A. Woodward, Baltimore, Md.,	10.00

$810.00 placed at your disposal by the liberal dealers who are named above. We hope the roll of members will increase fast from this time on, and that the next journal will have not less than 500 named as members.

Fraternally,

Gayton A. Douglass,
Secretary.

ALL ABOARD FOR THE P. A. OF A.

I take it for granted that every photographer and his wife or girl will attend, in August, the greatest and grandest gathering of photographers ever assembled. The committees in charge are doing all in their power to make the assembly pleasant, and in the highest degree instructive. No one who has an interest in the art *can afford* to stay away.

To those in the smaller cities and villages it will be especially a matter of gain financially. *Thusly*, if you stay at home all the time, your customers will say, "we can go for our pictures at *any* time," and that means *no time*. On the contrary, if you begin now to advertise that you are going away, and all wanting pictures must come *now*, so you can have time to finish them before you go, they will feel the necessity of improving the opportunity, and thus your increased trade will more than pay the expenses of the trip. If there are two or more galleries in the place, all "chip in," and say you are going; but if one should be so stupid as to think he will stay at home and get the cream while the rest are gone, he will find himself badly left. This I know from personal experience; and from the evidence of many with whom I have conferred, I would advise shutting up your gallery, or at most only leaving some one to answer questions.

In Galena, about thirty years ago, when there was a population of over 12,000 inhabitants, I found it always to pay to take a vacation of a month or more in summer, and visit the Eastern cities. The increased business before going and after returning very much more than paid all expenses, and a balance over what I could have done by staying at home all the time. When you get back, advertise your return, with all the new improvements, and invite an inspection of them, and you will then realize the wisdom of the above advice.

I take it for granted you will learn something, for no one knows so much but that he can learn something he has not before thought of. All who go should have their minds made up to have a good time socially, a rest from the routine cares of business, to learn all they can from others, and to impart to others anything that will be useful to them. Be sure you attend all the meetings of the society. In the old National Photographic Association, too many neglected this, and thereby lost the instruction they went to gain. The committee on transportation are perfecting arrangements whereby *very low rates* can be secured by going in a large body from Chicago to New York; how low will depend upon the number going. Our plan is to charter as many cars as we can fill, and we must know a month in advance, at least, how many to provide for; so at once notify either the Secretary, G. A. Douglass, 229 State Street, or the Treasurer, A. Hesler, 96 State Street, Chicago, giving us your name and intention of going. We will leave Chicago on Saturday, August 13th, on one of the afternoon trains, so as to arrive in New York on the following Monday morning. We want all north, west, and southwest of here to join us in making a large body going from here, and can take in all on our route. Those who went with us to the Philadelphia Convention in 1870, need no reminder of the good time we all had on our trip to New York, and our reception there by Mr. Samuel Holmes, the agent of the Scovill Manufacturing Company.

Fraternally yours,
A. Hesler.

HOME-MADE GELATINO-BROMIDE DRY-PLATES.

No. 4.

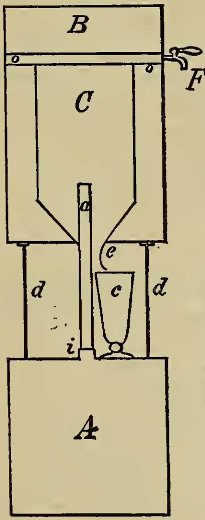
BY JAY DENSMORE.

(Continued from page 131.)

I do not think that any greater degree of care is necessary in making gelatin dry-plates than in working the wet process, for I believe that the greatest care possible should be observed in the manipulating of both processes. Carelessness with dry-plates may, however, be attended by much more disagreeable consequences than with wet ones. The wet process gives notice at once of your neglect, but the dry may let you continue your labors until the whole batch of plates is prepared and dried, when you find the whole lot worthless. The slouchy, slipshod way with which so many photographers work the wet process, will not therefore, answer at all with dry-plates. Such workmen had better buy their plates ready made, and they will, quite likely, do much better with them than they ever have with wet plates of their own preparation. If the wet process was not capable of better results than it usually produces in the hands of such careless manipulators, it would undoubtedly be "doomed" by the introduction of commercial dry-plates, as many of them are so very fond of asserting it is.

It is very necessary, in making gelatin dry-plates, to have *pure* water, and, to insure this, each operator should distil it for his own use. It is a very simple matter, and when once begun will be found very beneficial also in the preparation of both the negative and printing baths. The still I use is of my own manufacture, costs but little, and answers every purpose. It can be made in a short time by any tinsmith. It is illustrated in the annexed drawing, Fig. 6. A is a tin reservoir or boiler, eight inches in diameter and eight inches high, with a copper bottom. In the centre of the top of this reservoir is soldered a zinc cap with a screw cover, such as is used in kerosene oil cans. This can is perforated and fitted with a copper pipe, A, one-half inch in diameter, and nine inches long. This pipe is securely soldered in the cap aforesaid, and may be readily screwed on tightly, and as readily unscrewed and removed from the reservoir as may be desired. This reservoir I fill about two-thirds full of water and place it over an opening in the kitchen stove. When the water boils, the steam presses upward through the tube A. This steam is then converted into water by the condenser, which is composed of the two principal parts, C and B. C is a copper can five inches in diameter and nine inches high, being inverted inside of the tin reservoir, B, which is eight inches in diameter and twelve inches high. The conical top of the copper can C protrudes through the bottom of the tin reservoir B, and is firmly and tightly soldered in place. A strip of copper O passes across the bottom of the copper can C from side to side of the reservoir B, being soldered firmly to both C and B, thus holding C securely in place. The opening in the conical neck of C is one inch in diameter, and is turned up inside, so as to form a gutter and spout E, by means of which the condensed steam, as it runs down the inside of C, is conveyed to the glass dish C placed below to receive it. The reservoir B is kept filled with cold water, which keeps the can C cool, causing the stream which issues from the pipe A to be immediately condensed, or converted into water, which is collected in the glass dish C. As the water in the reservoir B becomes heated, it is drawn off by means of the faucet F, and more cold water added to take its place. In making the copper can C and the pipe A, I had the tinned side of the copper placed inside. Three supports, six inches long, two of which, D D, are shown in the drawing, are soldered to the top of the reservoir or boiler A, and a ring of tin one inch wide is soldered around the tops of these three supports, to form a safe rest for the condenser. The condenser is not soldered to these supports, but is simply placed in proper position when in use, its own weight holding it in place. This arrangement is easily kept clean and in order, and with it, by a very small allowance of trouble, when compared with the advantages gained, an abundant supply of pure distilled water may always be kept on hand.

Fig. 6.



I wish to call particular attention to my method of purifying the gelatin before it is used in the emulsion, as it is very important. All samples of gelatin that I have tested, contain a great many impurities that simple filtration will not remove, but by adding albumen in the manner indicated, and boiling, the albumen is coagulated and separated from the gelatin, taking with it the greater portion of such impurities, when they are easily removed by filtration.

I have tried several of the published methods of washing the emulsion, but have always been much better suited with the alcoholic method as given in No. 2 of this series of articles. By it much of the mussiness of the washing incident to other methods is avoided, and one of the most delicate and difficult portions of the process is rendered easy, simple, and certain.

The substratum, also given in the same article, is a sure cure for frills and blisters, if rightly and carefully used.

The process, as I have outlined it, is so very simple that it does not seem to me necessary to occupy further space with explanation, but should there be any who fail to comprehend any part of it, and wish further explanation, if they will make the fact known through the *Philadelphia Photographer*, I will try and assist them to find a way out of their trouble through the same medium.

I promised to treat of the advantages offered by the new dry process, this month, but I find my space already filled, so I must defer such matter another month.

(To be continued.)

A FEW NOTIONS IN REGARD TO CHEMISTRY.

BY DR. J. H. WARRINGTON.

(Continued from page 136.)

We hope the few ideas which have been presented in the previous article may aid the student in understanding some of the principles of this, to many, abstruse science. But we wish it distinctly understood that we merely hope to *aid* the student in his study, and not make it an exhaustive treatise. The forthcoming *Photographics* will, no doubt, have a large space devoted to it. But to resume: allusion has been made to the terms ferrous and ferric as applied to iron compounds; the same terminals are used with any other element acting as a *base.* What is a base? The definition given in the books is, "a substance capable of combining with an acid to form a *salt.*" Well, what is an *acid?* The same authorities tell us that it is a substance capable of combining with a base to produce a salt. Let us see what an acid really is: more or less sour to the taste, more or less corrosive in its action, *always liquid*, and more or less capable of reddening vegetable-blue colors. It was formerly considered that oxygen (an element to be more fully described subsequently) was the basis of all acids, but subsequent reasoning has shown that hydrogen, another important element and the basis of water, is the true occupant of that position. I say *always liquid.* Let us see. There are a number of substances called acids, in commerce, which are solid, *i. e.*, citric, oxalic, tannic, etc., and there are some which, in their normal condition, are gaseous, as, for instance, carbonic acid; but, according to the definition, will they fulfil the requirements? Take the vegetable-blue test; a piece of what is known as blue litmus-paper should, if placed in contact with any of the above solids, be at once turned red. Will it? Try. Lay a portion of any of them on it; does it change? No! Why? Because it is *not an acid!* Moisten the mass and, presto! it reddens the paper. In the same way a piece of dry blue litmus-paper hung in a jar of dry carbonic acid gas (*carbon dioxide*) might hang there (the same conditions being maintained) forever without being changed to red; moisten the paper and return it to the gas, *at once* it is reddened; hence we see that water is necessary to its acid condition, and as hydrogen is, as before stated, an important element in the composition of water, it is now considered that an acid cannot exist without hydrogen in its composition. Take another very strong illustration. There is a compound, SO_3 which is a white crystalline solid, which may be handled with dry hands with perfect impunity, will not affect blue litmus-paper, but which, when thrown into water, hisses like a hot iron, and the usual tests show it to be a very powerful acid, and which, if the hand were dipped into it, is capable of corroding the skin very quickly. The crystalline substance was formerly called anhydrous (without water) sulphuric acid, but when it has once combined with water can never be recovered again. Let us see what the composition of this new compound is. In the first place, the original compound was SO_3 (sulphur trioxide); add one molecule of water, H_2O, and we have $H_2O + SO_3$, and as chemical combination has taken place, the two compounds having united to form one, we will write it H_2SO_4 which is the oil of vitriol, or sulphuric acid of commerce, but, chemically speaking, hydrogen sulphate.

These new terms, to students of the old nomenclature, are very confusing, and I will state one fact here which may help to reconcile their minds to the change. Having shown above that hydrogen is necessary to the composition of an acid, and bearing in mind the fact that hydrogen is a *metal*, we are prepared to understand why it is called hydrogen sulphate; why muriatic acid is now known as hydrogen chloride, and *aqua fortis* as hydrogen nitrate; and we will see further on how other metals may replace the hydrogen which, in many instances, assumes its gaseous condition.

Litmus-paper is prepared from an infusion of the blue coloring matter called litmus,—found in commerce in the form of small cubes,—in hot water, into which (after careful subsidence or clean filtration) strips of unsized paper are dipped, saturated, and then dried: this forms the blue litmus-paper of commerce. The red paper is made by the same process; the blue liquid having been reddened by an acid, preferably hydrogen chloride. As there is an abundance of free alkali in the litmus infusion, the paper prepared as above fails to detect a slight acidity which is very necessary in so many operations of the laboratory, photographic or general. The excess must be removed, and it is best accomplished in this way. Make, as above, a clear infusion; divide it into two equal parts, add dilute hydrogen chloride, drop by drop to one, with constant stirring, until it is faintly red (seen by holding a piece of white paper behind the glass vessel), then add the remaining portion to it, and thoroughly mix. If red paper be wanted at the same time, it may be made by dipping the paper in the acidified liquid before mixing, or making an excess to allow for the volume removed by absorption. Paper prepared in this way will be found to be very satisfactory; the litmus being easily obtained from any drug store, and at very low cost. It should be kept in boxes, dry, and away from fumes of acids, or ammonia, or *tobacco smoke.*

Experiment.—Take a piece of red litmus-paper, prepared as above, and, having moistened it with *pure* water, hold it in the beautiful stream of tobacco smoke as it floats gracefully from your lips, and it will, like the chameleon, change its color to blue. *Ergo, don't smoke where you do not wish the exposed solutions to become alkaline,* and if you will take *physiological advice, you won't smoke at all—never.*

Having, we trust, satisfactorily defined the properties of an acid, let us revert to and examine the term base. The definition given above is a substance capable of combining with an acid to form a salt. Bases may be divided into two classes, alkaline or neutral; the former have, in addition to the general properties already stated, the power to restore the blue to reddened vegetable colors (that is, where that red has been produced by an acid), and are more or less corrosive in their action, while the latter are simply inert, that is, have no action, *pro* or *con*, on blue or red litmus-paper; and, with the exception of some organic compounds, may be considered as metals.

Salts are the result of the combination of an acid and base. Although bases combine with acids, and the properties of each are supposed to be changed, that is, each is merged into the other, yet we find many cases in which salts containing one molecule of acid and one atom of base do not show perfect neutrality to litmus-paper, some having an acid and some an alkaline reaction. Bases frequently combine with more than one molecule of acid, and these are termed acid salts, as acid sodium carbonate (bicarbonate of soda), and also more than one of base, as lead diacetate (basic acetate of lead), and particularly in the sodium phosphate salts, which are known as basic salts; while the intermediate class is those containing one molecule of each, and are termed neutral salts; although, as stated, they are not necessarily neutral to test paper.

We have used the terminal *ide* several

times—what is implied by it? The compound of two elements; thus, chlorine combines to form chlorides; oxygen, oxides; iodine, iodides; sulphur, sulphides, etc. Many elements will unite with others in several different proportions. Take, for instance, nitrogen and oxygen; they form five definite and distinct compounds, thus:

Nitrogen Monoxide,	N_2O
Nitrogen Dioxide,	N_2O_2
Nitrogen Trioxide,	N_2O_3
Nitrogen Tetroxide,	N_2O_4
Nitrogen Pentoxide,	N_2O_5

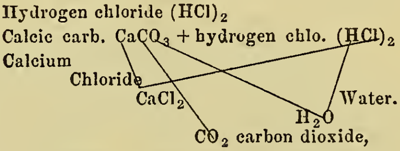
Here are five entirely different compounds of the same two elements, easily recognized, so that one cannot be confounded for another, and two of which, the third and fifth, are capable of combining with hydrogen to form acids $N_2O_3+H_2O=H_2N_2O_4$ (all written together, because chemical combination has taken place); and as they are equally divisible by two. we may reduce the expression to HNO_2, hydrogen nitrite, and in the same way N_2O_5 will make HNO_3, hydrogen nitrate (old name for first, nitrous acid, and for last, nitric acid). Note the difference; why does one class terminate in *ite* and the other in *ate?* Because, without giving their exact composition, it shows a difference in the degree of oxidation.

CHEMICAL COMPOUNDS.

If finely pulverized sulphur be thoroughly mixed with iron filings, equally small, the color will differ from both substances. A careful examination with a microscope will show the iron and sulphur lying side by side; and if a strong magnet be brought close to the mass, numerous small particles of the iron will rise up and cling to it, and can thus be separated from the sulphur. By carefully spreading it out very thin, it will be found possible to separate all the iron, leaving the sulphur unchanged. If the original powder be digested in carbon disulphide, with frequent agitation, all the sulphur may be removed by solution, and the iron will be left intact. But if the powder be *heated*, as the temperature rises, considerable action occurs, and ultimately it will become liquid, which, as it cools, will solidify, forming a mass differing entirely from either of the original elements, from which neither of them can be removed by the processes above described, and the closest examination with the microscope fails to detect either the iron or sulphur. Here we repeat the definition originally given, *i. e.*, the original elements totally lose their identity, and are not recognizable in the result. The original powder was a mechanical mixture, the latter a chemical result.

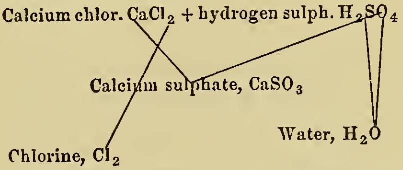
Experiment.—Make a very concentrated solution of calcic chloride by adding to hydrogen chloride some small lumps of calcic carbonate (chalk) gradually, until all action ceases; pour off the clear liquid; evaporate it somewhat to make it more concentrated; then pour it into a dry saucer, and add hydrogen sulphate slowly, with constant stirring; at once violent action takes place, and the liquid becomes white and pasty, while there is a gas given off, which is found to be very pungent, producing coughing and a choking sensation, and if a piece of moistened calico be hung in the air, just above the dish, it will be bleached, while the pasty mass will probably become nearly, if not quite, solid in a few hours.

What have we done, and how? Let us see.



which passes off as a gas in the effervescence, and may be detected by holding a lighted taper just above the surface of the liquid; the flame will be extinguished, and calcium chloride remains in the dish. Why two molecules of hydrogen chloride are required, will be investigated further on.

Again,



which passes off as a gas, and was recognized by its odor and bleaching properties.

Next time we will grapple with the interesting subject of chemical affinity.

(To be continued.)

"THE DOUBLE DARK-SLIDE OF THE FUTURE."*

Editor of the Photographic Times.

SIR: Will you please insert the following letter in your next issue, and oblige

THE SCOVILL MANUFACTURING CO.

Editor of the Philadelphia Photographer.

SIR: There are two ways in which, by certain classes, the introduction of most novelties is met: first, it is not good; second, it is not new. When, a few months ago, we introduced what has been universally acknowledged to be the most perfect dry-plate holder extant, we well knew that we should have to encounter these objections. No one, however, appears to have cared to stultify himself by hinting a word against its great utility, but our attention has been directed to a report of the meeting of the Photographic Society of Philadelphia, in which one of the members has put in a claim for its invention by another member, Mr. D. A. Partridge, which invention dates so far back as 1872.

Now, we have not the least doubt that "a double dry-plate holder opening on the end to admit the plates" was really invented by Mr. Partridge—in fact, it was invented by a great many people, although we have only been able to award the palm of *first* invention to Baynham Jones, who ten years ago directed attention to it in a foreign journal, the editor of which wrote a detailed account of the same—very unfortunately for Mr. Partridge's claims as the first inventor—a *year previous* to that in which this gentleman first exhibited his invention. It is also not a little unfortunate for Mr. Partridge's claims, now put forth by an ardent, if injudicious, friend, that, although everything transpiring at the meetings of the Philadelphia Society, and everything exhibited apparently worth recording, was duly recorded in their transactions, no notice whatever seems to have been taken of such an article having been exhibited during the year 1872, as now alleged to have been done. While it would undoubtedly strengthen Mr. Partridge's claims to be a public benefactor if he could indicate any publication in which notice of the same appeared (not that we doubt his *ipse dixit*), he would still, even if such could be shown, have to face the previous invention of Jones and its full and detailed publication in an English journal which was well known in Philadelphia.

From the fact that we have always acknowledged the foreign inception of the general idea, it is evident that some ignorance prevails as to the real points of the improvements for which the patent was granted to us.

We have no remark to make upon the courtesy displayed by Mr. Fox, who, *believing* that the Scovill Manufacturing Company had by a presumed piece of inadvertence reinvented a Philadelphia invention which had been kept *sub silentio*, not even alluded to in the transactions of any society (even that of which the inventor was a member), and never heard of anywhere outside of a coterie of friends, should nevertheless have kept his thunder carefully bottled up, and so as to make a public discharge at their devoted heads by rushing into print instead of sending them a private intimation as to the insecure ground on which they as patentees stood—a course which would have been appreciated, if only as showing good feeling, although it would not have trenched upon the merits of the case.

When Mr. Fox and his fellow members have an opportunity of seeing the specifications of our patent, they will then learn the precise nature and extent of our claims.

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* Having permitted "A Communication" of the Photographic Society of Philadelphia to appear in our last issue—page 143—stating that the new double dry-plate holder, patented by the Scovill Manufacturing Company, N. Y., was not new, etc.; it is but just to that enterprising company, so famed for their enterprise in supplying useful and excellent apparatus for the trade, that we also publish their response. We give it, therefore, as it appeared in the last issue of the *Photographic Times and American Photographer*. Surely, no one having seen the holder of Mr. Partridge and that of the Scovill Manufacturing Company, would say they were the same any sooner than they would declare the old sliding-box camera and the present light and graceful cameras of the day to be the same.—ED. *P. P.*

Yours, etc.,
THE SCOVILL MANUFACTURING CO.,
Per W. IRVING ADAMS, Agent.

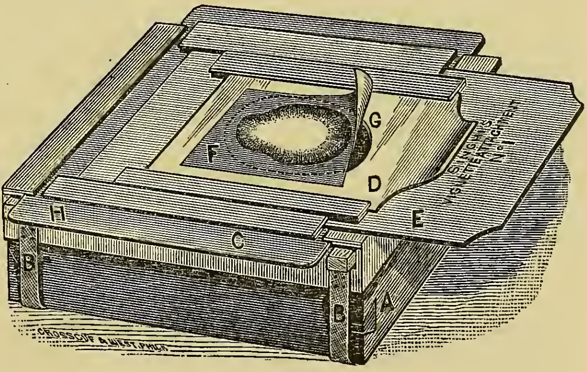
[The *raison d'etre* of the foregoing letter and its appearance in the columns of the *Photographic Times* is simply this: The May issue of the *Philadelphia Photographer* contained a report of the meeting of the local society, together with a letter to the editor, in both of which attention was directed to the previous invention by Mr. D. A. Partridge of a double dark-slide in which the plates were inserted through an aperture at the end. It was not considered necessary, or perhaps desirable, that intimation to such effect be sent to this journal, in which of all others the fullest publicity concerning the first history and subsequent improvements of the slide has been given. But we desire to make a further remark concerning the slide. In one respect only, and that historically, has an error been made, and we now hasten to rectify it. Whereas the Philadelphia invention claims to have been exhibited (although no publication of the alleged fact seems to have been made) during the year 1872, and whereas the then editor of the *British Journal of Photography* wrote a detailed account of a similar invention by Mr. Baynham Jones in 1871, to whom he subsequently gave due credit as the inventor, it so happens that Mr. Jones, although a year in advance of Mr. Partridge, must now be set to one side to make place for the real and first inventor, Mr. Thomas Macinlay, one of the founders of the first Liverpool Photographic Society, at a meeting of which on May 3d, 1853, a description of the slide was first given; and those interested will find it published, with drawings, in Vol. I., page 23, of the *Liverpool Photographic Journal.* Our Philadelphia friends will have to antedate this ere Mr. Partridge's claims can be received.—*Editor Photographic Times.*]

SINGHI'S VIGNETTING ATTACHMENT.

FOR USE WITH WAYMOUTH'S VIGNETTE PAPERS.

ON page 230 of Wilson's *Photographics* we find the following:

"Photographic prints as a usual thing are divided into two styles—the 'plain' and the 'vignetted.' The former are such as are printed from the negative without masking or obscuration of any kind, and the latter are such as are tastefully blended off from the darkness of the figure towards the outer margins. To accomplish this last effect a great many devices are used, the simplest and best of which are known as Waymouth's Vignette Papers. They are lithographic designs very carefully gradated, printed on superior tissue-paper, and placed over the negative at a short distance therefrom, during exposure to the sun. Several devices have been invented and suggested for adjusting these vignette papers to the negative, the best of which seems to be the invention of Mr. J. F. Singhi. The drawing annexed shows his device in use. A is the printing-frame supposed to contain a negative; over the face of it a light, close-fitting box, about one inch deep, is fastened and held in place by the gum-elastic bands, B B. At each end of the box strips are fastened, forming slots in which the slide, C H, freely moves from right to left. C H is also provided with strips, forming a second series of slots in which the next slide, E, freely moves in and out. Over E is a third



series of slots, in which the slide, D, moves, provided with an opening, G, of any desired size or shape, over which opening the Waymouth Vignette Paper, F, is pasted, but turned up at one corner in order to show the opening, G. Now, by means of these slots, it will be seen that once the vignette paper and negative are brought into relation to each other, and held up to the light, the arrangement of slots and slides permits the nicest and speediest adjustments to be made, when the printing may be proceeded with. As the attachment fits the printing-frame by friction, it is raised and lowered to the right distance required between the negative and the vignette paper by means of wooden strips inserted at each end, and tapered to suit. The arrangement is very complete, and its results are all one could desire. The vignette printer will remember that the farther the vignette is away from the negative, the more gradual will the gradation be, as well as softer and wider in effect. Used with taste, this device renders artistic vignette-printing a matter of easy accomplishment. Negatives which are to be printed for vignettes should be made with a light background, and never intensified."

After many experiments Mr. Singhi perfected his invention, and announces his readiness in his advertisement to supply them. "Our Picture" this month is a good example of what can be produced in this way in the line of tasteful and beautiful printing.

THE TRUE INVENTOR OF PHOTO-TYPOGRAPHY.

II.

ALLOW me to state a few facts in reply to the claims which Mr. Petit makes in his communication which you published in the May *Philadelphia Photographer.*

Mr. Petit says I claimed priority in the use of a gelatin relief for obtaining a half-tone image which may be printed from typographically. Although I believed I was the first to make such use, I made no such claim. I merely stated the fact that I invented, in 1878, a process which Mr. Petit published, apparently for the first time, in May, 1880. My original invention was the production of a line or stipple print by pressing an inked photographic relief against paper having a surface of raised lines or stipple. I now claim that I invented that process not only *before* Mr. Petit, but before *any* process of his was published in England or America. Mr. Petit *may* have ruled reliefs with a V-shaped tool before; that is another idea, which occurred to me later, and, like Mr. Petit, I saw that it was inferior to the impression process, which is the one we both have devoted ourselves to perfecting.

The date of a United States patent never indicates the date of invention. After inventing the process, I took care to establish my claim properly, because I did not wish to apply for a patent until I made certain important improvements. The first account of Mr. Petit's experiments which I saw (in August, 1880) is that which was laid before the French Photographic Society in May, 1880. On the day I learned what process Mr. Petit claimed to have invented, I commenced making out an application for a patent, and decided to cover the modifications and improvements which I was making by other later patents. I believed from the first that Mr. Petit invented the process independently, but that I invented it long before he did; and I have not yet been able to find any account of his experiments which was published before May, 1880. His English patent, claiming the use of both the V-shaped tool and the grained paper, was issued May 17th, 1880. I now learn for the first time that he issued a patent on some kind of photo-typographic process in France, August 8th, 1878. What that process is I do not know; though it certainly cannot be the one for which I hold the United States patent, because he describes that in May, 1880, as if it was only recently thought of by himself, and a great improvement on his older method, which he does not say when he invented.

If Mr. Petit wishes to establish the facts of the case beyond question, let him at once present all of his claims definitely, with dates and with proofs of their accuracy. In a controversy of this nature, statements not accompanied by conclusive proofs of accuracy are not acceptable to the public.

I would also suggest that he forward to the editor of the *Philadelphia Photographer* copies of the *earliest* printed publications of his various experiments. Mr. Wilson is already acquainted with the date of my invention and the character of my affidavits, which will be made known in my further reply to Mr. Petit, so that the public may decide what we each have a right to claim.

Besides being the original inventor of the process for which I hold the United States patent, I have first made it possible to work it rapidly and economically, by substituting the plaster relief from swelled gelatin, and the *elastic* line or stipple surface, for the hard gelatin relief and lined or stipple paper, which I employed in 1878, and which Mr. Petit appears to still approve. I also claim that my method of making lines crossing each other in the shadows greatly improves both definition and effect.

If Mr. Petit had been working the process successfully for a year and a half, and it proved rapid, economical, and otherwise satisfactory, I think we should have heard something of it in the photographic publications before this. Instead of that, in the April *Philadelphia Photographer* Mr. Vidal, who forwarded Mr. Petit's plate and communications, says his experiments "have not yet led to results which are absolutely satisfying," *and calls attention to the importance of a more definite solution of the problem.*

The fact is that my original process, the one finally adopted by Mr. Petit (according to the communication already referred to), although a great improvement on his first ideas, will not bear any comparison, in point of rapidity and economy, with my improved method published in the March *Philadelphia Photographer.*

Very respectfully,

Fred. E. Ives.

P.S.—Crosscup & West furnish for this number of the *Photographer* a portrait of the editor, engraved from life by the improved process. It is a fair specimen of the class of work which they are now prepared to produce rapidly, and at prices much lower than for any other kind of engraving. All who are acquainted with the editor will be impressed with the wonderful accuracy of the *likeness,* which could not be equalled by any other method in use.

[We do not propose to enter this contest; but it is fair to say that Mr. Ives has shown us the affidavits he alludes to, and satisfied us as to their genuineness.—Ed.]

OUR PICTURE.

We have been favored by Mr. J. F. Ryder, Cleveland, Ohio, with some negatives for "Our Picture" this month which fairly rival everything of their class of subject that we have ever been able to present heretofore.

They are all of sweet, adorable little girls, such as—bless them!—always make the photographer's heart glad by their good behavior, and the wondrous understanding which they evince as to what is required of them. No people indeed, as a class, show more sympathy for, and give more ready help to, the photographer, while being posed, than do these same dear little girls. We always delight to see them come in, and so does everybody else. Therefore we cannot have gone far wrong in calling our picture "A Household Goddess," not to say "A Gallery Goddess!"

No less than five or six of these tiny blessings have helped serve our purpose this month. One of them is gracefully poised in a swing, looking as fairy-like as a fresh air-castle. Another is just doing nothing at all, except looking sweet and pretty, and allowing her tender conscience to sway her while she poses, lest she move and spoil all. A third is aggrieved over the broken doll at her feet. Friends have tried to soothe her and reassure her, and yet she chooses to grieve, as did another tiny one in *St. Nicholas,* as she tried to convince herself that the dead dolly must know that her own neglect had caused the dire calamity as she thus soliloquized:

> "But I know that she knew it now, and I just believe, I do,
> That her poor little heart was broken, and so her head broke too.
> Oh! my baby! my little baby! I wish my head had been hit,
> For I've hit it over and over, and it hasn't cracked a bit.

"You needn't be trying to comfort me—I tell you my dolly's dead;
There's no use saying she isn't, with a crack like that in her head.
'Tis just as you said, it wouldn't be hard to take my photograph that day,
And then, when the man pulled my hair most off, you hadn't a word to say."

And still another noble little one, such as blesses many of our homes, pleasantly occupies her tiny hands with a flower while she obediently steadies herself in her most natural and graceful attitude. Such little goddesses bless many of our homes, and make us measure them with these sweet pictured ones, while we would fain sing:

Our "household goddess" sweet is no dread sinecure.
Her eyes—*dear* eyes—are gray and bright and tender.
Her child love, love makes, so kind, sublime, and pure,
She scatters sunshine roundabout with radiant splendor.

Her cheeks like hedge-roses glow, softly blending
With the olive tinting of her wondrous face,
Mass up such color, as, without intending,
Send even *her* fair tresses flying in disgrace.

Such subjects as this, all will agree, compensate for the many hardships which the skylight-man must endure.

The prints were made upon the extra brilliant (white) Dresden paper of Mr. G. Gennert's importation, and were vignetted with Waymouth's Vignette Papers, used in the manner described on page 187.

There is no excuse now for photographers making imperfect vignettes when they have such perfect means of producing them as Waymouth's Vignette Papers, with Singhi's attachment, supplied to them for their use.

It is hardly needful that we should say a single word of commendation for Mr. Ryder. His work is admirable, and he is especially happy in his handling of household goddesses. It is a long time since we have looked upon a series of more beautiful negatives than those used by us for this purpose. Not only this praise is due to Mr. Ryder, but much more for his willingness to aid us in bringing such admirable studies to the attention of our hungry patrons.

FRENCH CORRESPONDENCE.*

Death of Adam Salomon—New Emulsions of Messrs. Jonniaux, of Liege, and Stoerk, of Paris.

One of our most widely known and justly esteemed photographic celebrities, Mr. Adam Salomon, has just died at Paris, in his 63d year. We had seen him a few days before, and nothing seemed to indicate this catastrophe. We all know with what artistic perfection Adam Salomon made photographic portraits, and persons of all nationalities, in visiting Paris, were desirous of posing before this artist, who was truly unique in his line. Although the price of his photographic portraits was very high compared with that of other photographers, he could not fill the numerous orders that he received, so that in a few years he was enabled to accumulate an ample fortune. Without entirely giving up his professional art, sculpture, he had been greatly taken up for some time by the more lucrative and rapid application of his artistic taste to the production of photographic works. He retired to a charming villa at Passy, doing but little professional work, and in what concerns photography. When he consented to give to the execution of a portrait the finish of his personal attention, the picture was taken at another establishment, where he would go to study the pose of the sitter, the photographer having nothing more to do than to reproduce what Adam Salomon had arranged. At times he made busts and medallions, but when it pleased him, and as an amateur. Most certainly it is a great loss for our art. The collection of negatives left by Adam Salomon must be very large and has very great value. What will become of it? This is a question that I cannot answer. There is in this collection a large number of portraits of our principal cotemporaneous celebrities. These are private property, and which cannot be disposed of without the consent of the persons themselves or, in case of death, of their assigns. It is therefore impossible to parcel out this collection, which will undoubtedly be passed over to some photographic house, with all the restrictions and advantages possessed by an artistic capital of this nature. The duplicating of portraits formed, already, an important revenue for our skilful colleague. We are more indebted to him than to anybody else, for having elevated photography in France to the height of a true art in the acceptation of this word, applied to works of art. This is a glorious title for him, as he has thus proved to the enemies of photography, considered as an art, that they are in error, and that an artist produces an artistic work whatever means he may employ, even should it be photography.

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* Owing to its late arrival, we are compelled to lay over part of Mr. Vidal's valued letter.—Ed.

Gelatino-bromide emulsions still continue to interest by their variety. The initiative taken by our eminent colleague, which consists in preparing emulsions ready for use, and sold in bottles, which it is only necesary to heat over a water-bath, to have the emulsion in proper condition for using, has found, and, I may say, has encouraged imitators. Messrs. Jonniaux & Co., of Liege, have manufactured an alcoholic emulsion containing a few traces of acetic acid, but no pyroxylin, as that of Dr. Vogel. Mr. Stoerk, on the other hand, prepares an emulsion with methylic alcohol containing no acetic acid. These emulsions are sold in bottles, ready for use, after having been exposed to the action of gentle heat. They are sufficiently siccative and of good preservation. We believe that, thanks to these products, photographers will find it very easy to prepare their sensitized plates. This is what they generally desire, resembling in this good sportsmen, who prefer loading their guns with substances with the merits of which they are familiar, rather than with cartridges already prepared by the manufacturer. The manufactured sensitized plate is nothing more than the photographer's cartridge.

LEON VIDAL.

PARIS, May 1st, 1881.

Editor's Table.

PICTURES RECEIVED.—Our crowded space prevents us from expatiating as extensively as we would like over the pictures received this month. Some splendid things are on our table which cheer us with the belief that *photography improves* continually and surely. We have received the following: From Mr. R. D. BAYLEY, Thorold, Ontario, a rather pretentious set of cabinets, illustrating the life (and death) of the pirate. The management and the photography are excellent, more so than the choice of the actors in the tragedy sometimes. Some interesting cabinets from Mr. J. S. MASON, Medina, Ohio. Some photo-sculpturesque portraits from Mrs. R. MAYNARD, Victoria, B. C. Some boudoirs and cabinets from Mr. W. R. WRIGHT, Princeton, Ind., which are very excellent. From Mr. and Mrs. R. W. ELLIOTT, Newark, Ill., some cards and cabinets from bromo-gelatin plates, which show that they have mastered this new process very satisfactorily. From Mr. W. H. PARTRIDGE, Boston, a study of an old gentleman, (photo-engraved for our cover) and a cabinet of a little child posed in an overturned basket. The latter is very cute. From DOUGLASS, THOMPSON & Co., Chicago, cabinets entitled "I's Awake," and "I's Sleepy," being groups of laughing and crying *negro* babies—the most *excruciating colored* pictures we have ever looked upon. They were captured by Mr. JOHN McGREER, and will have a tremendous sale. From Mr. F. B. CLENCH, Lockport, N. Y., a batch of cabinets from bromo-gelatin plates which rival anything we have seen in portraiture by this new process. Indeed, Mr. CLENCH's results are fully equal to his wet work, and he expresses a decided preference for the new plates.

IF we may judge from his productions, surely Mr. WELL G. SINGHI, of Binghamton, N. Y., has done more to elevate photography than any one else. The evidence of it is before us in the shape of a promenade picture of a little boy *on stilts.*

ITEMS OF NEWS.—WILSON'S *Photographics* contains 376 pages, quotes nearly 250 authorities, contains over 100 engravings, and occupies 27 lessons or chapters. See advertisement. We thank Mr. THOMAS GAFFIELD for a copy of his essay read before the American Association for the Advancement of Science, "On the action of sunlight upon glass." Messrs. C. COOPER & Co., 194 Worth Street, N. Y., for their price-list. The BLAIR TOUROGRAPH Co., Boston, for a copy of their catalogue and their guide-book. DOUGLASS, THOMPSON & Co., for the May issue of the *Bureau of Information*, and SCOVILL MANUFACTURING Co., N. Y., for circulars advising of new manufactures and importations. Mr. E. D. EVANS, Ithaca, N. Y., is given a very fine notice of his new gallery and his work in the *Dryden Herald*. A 10 x 22 group of students is particularly praised as being very fine.

MESSRS. PECK & SNYDER, N. Y., who advertise the bird baby-husher, compliment us on the value of our magazine as an advertising medium, and say, "We think it paid well." Others should try us.

MR. ISAAC PAXSON, the well-known solar printer has removed from Broadway to more convenient quarters at No. 65 East Ninth Street, N. Y., where old friends and new, seeking enlargement of pictures or purse, are welcome.

MR. E. B. HOUGH, Syracuse, N. Y., whose reputation as a background painter, is well established, asks attention to his advertisement this month.

"OUR PICTURE" next month will be made up of a copy from Mons. ADAM SALOMON's admirable 8 x 10 studies. The August issue will be from negatives by Messrs. GILBERT & BACON, Philadelphia, worked in Artograph style by Mr. WILLIAM OSBORNE. A beautiful statuary group is also "in print."

MESSRS. GEORGE KNELL & SON, 226 South Second Street, Philadelphia (chairs etc.), began business in 1864 and not in 1867, as our types said. They began with the *Philadelphia Photographer*, and we both still flourish.

DR. WARRINGTON'S "Notions" about chemistry promise to be very useful, since the author is both an educated chemist and a practical photographer.

MR. HIRAM J. THOMPSON, Chicago, favors us with a new catalogue of "a few new things." Get it, sure.

TESTIMONIALS to the value of our books and magazines come in from all sides. Mr. C. W. WORTHINGTON, Greenville, Pa., says, "I have never regretted any money I have invested in your publications." Mr. W. R. WRIGHT, Princeton, Ind., says, "I am delighted with your 'studies' in the magazine, and your 'leaflets' are capital." Mr. J. S. HANNA, Auckland, New Zealand, writes, "We in this remote corner of the earth can ill afford to do without such a valuable addition to our photographic literature as your magazine."

ANOTHER PHOTOTYPOGRAPHIC PROCESS.—We learn that Mr. ALFRED JONES, of Yonkers, N. Y., has patented a method consisting of first producing a relief film from the negative, and then engraving a plate direct from it by means of a pantograph or equivalent device. Mr. FRED. E. IVES, inventor of the phototypographic process described in the March *Photographer*, showed us a plate about nine months ago which he engraved by exactly that method. He also produced pen drawings on smooth paper with the same device.

MR. GENNERT'S PRIZE OFFER, first made public in our last issue, should receive the attention of all who are able to compete, and we hope the competition will be a large and generous one. The offer is made with a desire to stimulate effort and secure progress in our art. He should be encouraged in this, and we hope the generous ones will do it. Usually one is afraid of another, but it should not be so. Let the competition be active, and make the winner earn his prize.

STUDIES IN ART.—We have accepted the agency for the celebrated "studies from pictures in the Dresden gallery" of paintings, which we now have in stock and for sale low. A list of the subjects contained in the portfolios and the prices are given in the advertisements. Those who love the beautiful or who want to follow up the study of art cannot do better than to secure a portfolio of these lovely celebrated pictures. They are made by the phototype process, and cannot be told from original engravings.

OUR cover outline study this month is from a cabinet portrait made by Mr. W. H. PARTRIDGE, Boston, Mass. It gives us a very fair representation of the outlines of the picture, but, of course, fails to render any idea of the delicate lighting and effect of half-tone secured in the original, which is one of the most artistic pictures we have recently seen.

PHOTOGRAPHICS has been even more favorably received than we anticipated. We thank our friends, one and all, for their kind words of approval. They make us glad that we did the work, and we hope its usefulness will be extended far and wide.

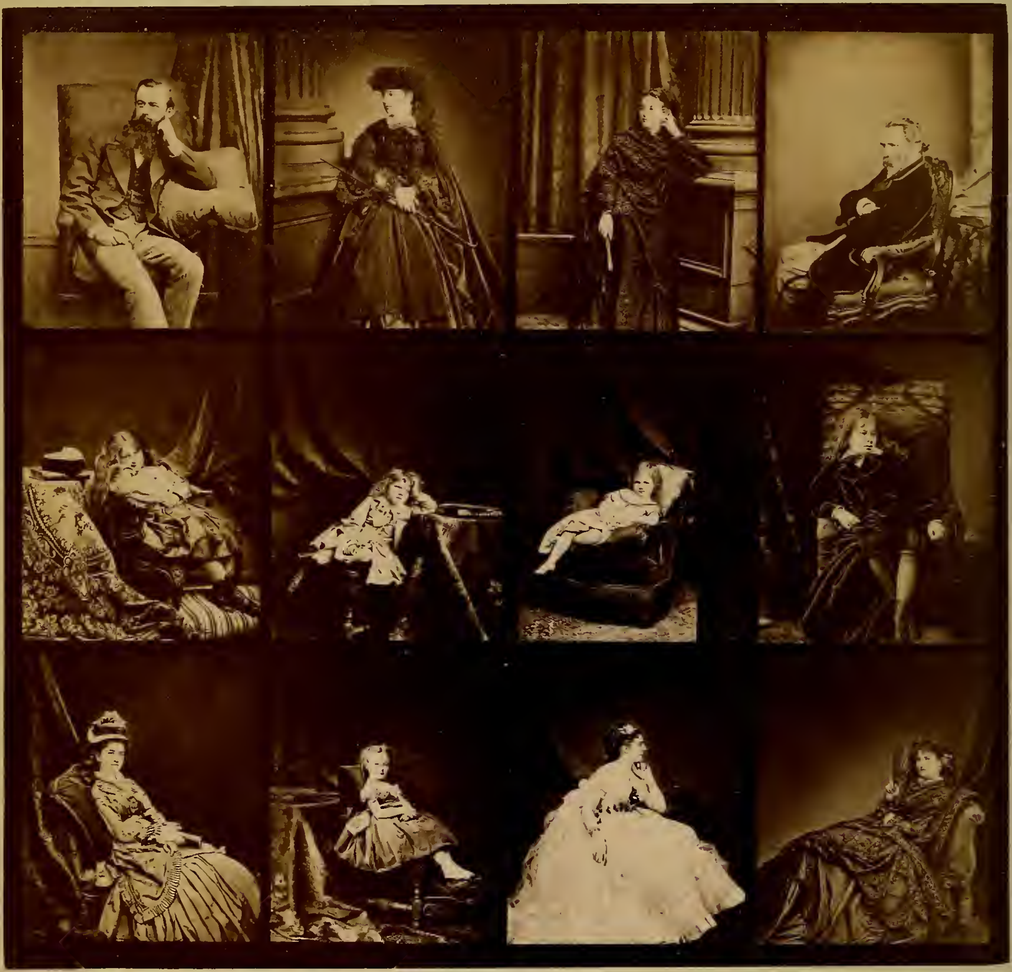
IVES' PROCESS, PAT'D

CROSSCUP & WEST, PHILA.

Boston Public Library.

EDW. L. WILSON,

EDITOR "PHILA. PHOTOGRAPHER"



Boston Public Library.

PORTRAIT STUDIES.

BY

ADAM SALOMON,

PARIS.

Reduced from 8 x 10 Photographs.

LIST OF SUBJECTS.

EDWARD L. WILSON,
LITTLE PRINCESS,
HEART OF MY HEART,

LADY IN THE RIDING HABIT,
TIRED AND THOUGHTFUL,
SWEET SEVEN,

THE WIDOW,
MISS FLEXIBLE,
THE WHITE DRESS,

ADAM SALOMON,
THE HEIR APPARENT,
THE FAN DRILL.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. JULY, 1881. No. 211.

ADAM SALOMON.

A Sketch.

Last month it was our painful duty to announce the death of Mons. Adam Salomon, of Paris, who, in some respects, was the greatest photographer the world ever saw.

His name has only been known to our readers for about a dozen years, and yet we had all learned to look up to him as a master and as an example. First as an artist, then as a correspondent, and finally as a personal friend, he grew very near to us, and it is difficult to separate one's personal feelings from what alone should appear in a sketch of his life, in a magazine devoted to the art which was always such a fascination to him.

We may ignore the fact that photography was only his second love, sculpture being his profession. We may forget that he accumulated an ample fortune from the product of his camera, and only look at what he has done for the improvement of those who still follow photography with all their heart and try to be like him. No one has done so much.

After he had quietly made a reputation in Paris, he was induced to exhibit some of his works at one of the Society exhibitions in London. Then it was that his fame among English-speaking photographers began, and it spread like wild fire to America—over all the world. His pictures were only of one size—8 x 10 inches. True, we all made pictures of that size, but we did not any of us make them as he did. They were different from anything any of us had seen—they were far better. In due season a few of them came to America, and presently we were favored with *one negative* from the famous artist, which, by careful nursing, we made do to print "Our Picture" from in September, 1870. Then our readers were given some idea of what his effects were like, and they tried to secure them in their own work. The influence all over America was observable in our next National Exhibition, for "Salomon effects" of no mean quality were shown from many directions, and those who tried to make them have always felt the benefit of the exercise, though *none* of them, so far as *we* have ever seen, have succeeded in securing *just* the effects that were obtained by our lamented friend. How did he get them? We can only tell what we told after a happy day with him. It will not be out of place to repeat part of it from our October, 1874, issue, page 266.

"Did I go to see Mons. Adam Salomon? Ah, yes! What would a visit to Paris be without a day with him? As his studio and his method of working have already been described herein, and likewise an example of his work published, I will not go into details concerning them. I found all in the old master that I had expected to find. A little older and grayer than I had anticipated, but of that *I* dare not complain. He was busy with a sitter when I called, and pending his appearance I had much to entertain me with the exquisite examples of photography in his reception-room, and with the works of his mind and hands, as a sculptor, for it must be remembered that M. Salomon is a sculptor and not a photographer by first profession. Among his photographic specimens I found several that were familiar to me, the same that made us all sick at heart a few years ago, and many new ones. I found that the great master had not improved much. Ah me! He could not. His results were so far ahead that he could afford to stand still a few years. What he will do when we catch up to him I know not. But that there are many at home and abroad close upon him, even he will not deny. He loves photography and desires its progress. Yet, with all his imitators, there is a stamp, an *impress* upon his work so distinctively M. Salomon himself, that no one can reach it; a quality unrivalled, unequalled by anything else. I have for years worshipped at his shrine, and now I am standing face to face with him, his hand in mine. 'I need no introduction to you, Monsieur Wilson,' he said; 'I have your photograph and would know your face. Besides, here upon my table are always kept several copies of the *Philadelphia Photographer*, in which you have spoken many kind words for me and made my fame in America.' With such a greeting I soon felt at home, and had a most enjoyable visit. During the day I was invited to sit for a picture. I assured Monsieur Salomon that I would destroy his instrument. He took the risk. His skylight is low, and in the shape of an L, and he moves his backgrounds and cameras all about it to suit the light and the model. He is most exact and careful in the pose and arrangement of the figure, and in the composition of the lines, internal as well as external. Considerable time was expended upon my long, lank, awkward figure, before much of gracefulness would present itself. Seeming to be satisfied, and giving me no head-rest, he proceeded to place his plate in the camera, when down came the whole thing upon the floor with a crash, the camera-stand having given way. The laughter over, another stand was brought in, and the negative and several duplicates made. M. Salomon uses for his work the *Hermagis Lens*, made in Paris, about which more will be said when we visit the factory of M. Hermagis. I saw nothing peculiar in the method of working practised by M. Salomon. His success is due, 1, to M. Salomon himself, and 2, to the practice, rigidly, of what has been published over and over. M. Salomon's negatives are a mystery. They are thin and flat, and very often dirty, but from them he produces the richest tones that ever were produced, and I conclude that only with him as an ingredient in all the formulæ can they be produced."

You have here the whole story. No more can be *told*. On the eventful day described, after the camera-stand had been repaired and the pictures taken, a little home scene followed, which can never be effaced from our memory. After a walk about his splendid garden—for his home was in the country, next to his studio—we sat down to dine with him, with his beloved and amiable wife and youngest child—a son. Here the great man laid aside his restraint of greatness and was playful even unto childishness. We sat long and had much pleasant converse upon the art to which we were both devoted.

It was not very long after that when the sad intelligence came that Madame Salomon was dead, and our warm-hearted, sensitive friend was heart-broken. He could never recover from this sorrow, and he went down to the grave himself earlier than he would had his companion been spared.

The night before we left Paris a package came by the hands of M. Salomon's servant to our hotel quarters. It contained the negatives alluded to, and a number of examples of the works of the great artist. The negatives were intended to give the readers of this magazine some idea of the personality of the editor thereof, but upon our arrival in London, it was found that the Straits of Dover were too much for them, and they were hopelessly broken.

A "mosaic" of some of the prints has been made up and copied for "Our Picture" this month, and includes the only print made from the now broken negatives.

This is all the monument we can raise to the memory of our friend. We can never forget him or cease to be influenced by the lessons taught us by him, and there are many whom he has given as much freely. His works were marvellous; his heart was kind; his life was too short. Alas!

Among his sculptured works, we remember as the greatest, the "Genius of Study;" "Music;" the bust of Madame de Girardin, and the wondrous masterpieces on the tomb of Lamartine. His photographs all show the moulding influence of the sculptor and will always be found worthy of study.

OUR PICTURE.

THE sad news of the death of Mons. Adam Salomon, announced in our last issue, determined us to defer giving our patrons the picture prepared for this month, and in its stead to present a *mosaic*, made up from several of the studies given us by our deceased friend when last in Paris, of his own work. This, with the sketch given of him on another page, is all the monument we are able to erect to the memory of the deceased, beloved and admired, and though a very humble offering, it nevertheless comes from a grateful heart. And it must also be acceptable to our readers, many of whom will wish with us to keep the memory of this great man fresh and green, and to *all* of them as admirable studies in light and posing. The right hand upper picture—the place of honor—is given to the portrait of Mons. Salomon, which is the only one of the set not made by himself *wholly*. We believe the negative was made at the studio of Mr. Valentine Blanchard, in London, in imitation of Mons. Salomon's style, and, therefore, *part* of the work at least was his. It is an excellent likeness of him, though giving no impression of the merry, genial humor in which we found him on the day of our visit to him.

He was short and slight, with a wondrously well-formed head, as all can see. Of the works he gave us, we have chosen ten of those which we knew mainly to be among his favorites at the time, and to balance his with a male figure, included the portrait of the editor of this magazine alluded to in the sketch. The artistic eye will see in this last with what skilful pains each line of the figure and the interior lines of the clothing are managed—the action of the hands and the lower extremities, varying from each other, and the most possible being made of a tall, slender, wiry, obdurate figure. "The lady in the riding habit," was made ten years ago, when the artist used velvet draperies largely to get the lovely effects of light and shade for which he became so famous. This was always one of his greatest favorites. "The Widow," is not so pretentious a composition, nor should it be. The old-fashioned column is introduced again, but it is not obtrusive, and the drapery background, so often and so effectively used, is here introduced. This makes the *want* of it very apparent in the picture of Mons. Salomon. As a rule, it will be seen he broke up the monotony of the plain background in one way or another. "The Little Princess," is a lovely work of art in every sense of the word, and was also a favorite with its creator. We have seen his eyes twinkle as he held it off and examined it, and he called it one of his pets. In "Tired and Thoughtful," a fine example of diagonal composition is given, and yet, by the help of the lines in the table-cloth, we may find a fine pyramidal, too. The disposition of the hands in all of these pictures is wonderfully and beautifully managed. "Miss Flexible," is the most soft and fleshlike photograph we think we have ever seen, and is well named "Miss Flexible." The "Heir Apparent," is a splendid balance to the "Little Princess," and was equally well thought of by Mons. Salomon as one of his best efforts—truly "tres jolié!"

All these child-pictures are so simple and so sweetly natural that one never ceases to admire them. How *could* they be better?

"Heart of my Heart," is a fine composition, and wondrous in light and shade effect, and in simplicity of pose. And yet we can all see with what conscientious care each line is disposed, and each bit of light managed. A most lovely attitude for one of our own tender, gentle, lovable American love-creators, many of whom were the favorite subjects of Mons. Salomon, he informed us. "Sweet Seven," is placed next, because so similar in pose and general management, and how very appropriate is the pose for both; for in the first there is the lingering of sweet childhood peeping out from maidenhood; and in the second, a graceful dignity beyond her years, which is very sweet and pretty. Oh! they are both lovely. "The White Dress," is an example of a style which M. Salomon made very popular, at the time photographers feared to attempt such subjects, but he has taught them the folly of it. The disposition of the figure here is very fine—particularly that of the arms. The "Fan Drill," is another variety of diagonal composition, lighted from the other side of the studio from that used for "Heart of my Heart." They are all given to you for careful contemplation. We wish that the number could have been doubled or trebled.

Little did we think, when we asked the question in 1874, "What will he do when we catch up to him?" that M. Salomon would be taken from us before that time arrived, for no one has yet reached that certain quality of effects in the accomplishment of which our lamented friend *stood alone.*

A CHANCE TO RAISE PRICES.

There is always more than one way of getting out of a difficulty, and if those who howl about "clubbing" and "cheap-Johns" and "tramps" would watch their chances, they could, as a rule, get ahead of these "nuisances," and come out first best. A new means of securing better prices and more work is even now at hand in the new bromo-gelatin process. How you may bring it before your patrons is very pertinently proven by the following very suggestive and business-like circular:

"In view of the wonderful and radical changes that have been introduced into the art science of photography during the past year, I deem it a privilege to be among the first to call the attention of my patrons to them.

"Not to go into uninteresting detail, I will say that, by a new process, I am enabled to make portraits instantaneously.

"All odors of ether and chemicals are banished from my studio. No waiting for plates to be prepared, nor hurry on account of plates spoiling, thereby losing expression, for sake of saving the plate.

"By the rapidity of this beautiful process, I am enabled to use an entirely different class of instruments, whereby correct drawing and definition are secured, and the unfortunate exaggerations of our old portrait lenses obviated.

"The larger sizes of direct photographs can now be made in so short a time that they will undoubtedly become most popular. As a minor consideration, all pet animals, equestrienne, and costume pictures are now matters of pleasing certainty.

"In a word, I am now enabled to give all my time and attention to the artistic part of my profession, the annoyance and unreliability of the chemical manipulations having been reduced to the minimum.

"In conclusion, I would respectfully invite the public to call at my studio and examine specimens of the new work, and especially those to whom sitting for a photograph has been an unpleasant ordeal, feeling confident that I can convince them of their mistake.

"With thanks for past favors, and soliciting a continuation of your patronage, I remain,
Respectfully,
"J. E. Beebe.

"Chicago."

Mr. Beebe is one of the young and growing photographers of Chicago. His points are excellently taken, and he sounds a cry that would do good all over the land. He became well practised in his work before he announced it to his patrons, and has sent us proofs of his success in the shape of some admirable portraits from 11 x 14 size down to cabinets. He has discarded bath and collodion altogether. His circular has met "with a very good reception," *i. e.* it brings him patronage satisfactory in every way. Mr. Beebe is a hard student of art, and is bound to rise. We wish photography was full of such men of feeling, and, though he is young yet, *any* one may follow him in this new direction without compunction and with profit. Study up the matter, and see where there is good in it for you.

MR. WARNERKE'S NEW DISCOVERY.

At the meeting of the Photographic Society of Great Britain, held May 10th, 1881, Mr. L. Warnerke, the distinguished experimentalist of London, read a paper on "A New Discovery Regarding Gelatin Emulsion," which deservedly created a great sensation, and which we reprint entire from the Society *Journal* of May 20th, of such vast importance do we consider it.

It would be unsafe, so soon, to predict what the effect of this discovery is going to have upon the future of photography, but it *looks* as if it was going to cause a revolution. We are now full of rejoicing that the bromo-gelatin emulsion enables us to dispense with the troublous bath, if we will. Can it be that *glass*, too, is doomed, and soon we shall escape the troubles which attend it also? But we must not speculate. Mr. Warnerke's method promises to be more troublesome in some respects. Our readers will studiously read his paper, and we promise to keep them promptly posted on all the applications which are made of it in the future.

A New Discovery Regarding Gelatin Emulsion.

Some short time ago, when investigating the nature of the photographic image developed on gelatin plates, I observed that the portion of the gelatin emulsion submitted to the combined action of light and the developer became insoluble in warm water.

The discovery of this new principle led me to make numerous applications of it. Gelatino-bromide emulsion in my hands proved useful in every branch of photography, and, in my communication to-night, I intend to make you acquainted with the broad principle, as well as with a general outline of its applicability to various ramifications of the photographic art.

The first and the most important application will be to negative-making generally. I proceed in the following manner: A sheet of paper is covered by the ordinary gelatin emulsion and dried. A precaution to be observed is, that the coating of the emulsion must be uniformly homogeneous, and when the sheet is dry that it remains flat. This paper is to be used, instead of a glass plate, in the camera—in fact, in all cases where sensitive plates are used for obtaining negatives or positives. The exposure is in accordance with the sensitiveness of the emulsion, but it remains strictly the same whether the emulsion is spread on glass or on the paper. The exposed sheet of gelatinized paper is next developed with alkaline *pyrogalol* development, exactly in the same manner as with the glass plate. After development it may be fixed or it may not; then it is preferably dried. Insolubility of the developed portion is produced as soon as the image is fully developed, but it is not so complete whilst the film is still wet. The same is the case with the action of alum on gelatin; and for this reason it is advisable to dry the image before the next stage of the process, which consists in removing by solution in hot water all parts of the emulsion-film not acted upon by light and the developer, and which consequently remain soluble in warm water. The action of light and the developer penetrates into the thickness of the film more or less in various parts of the image, according to the intensity of the light. It follows from this that under the insoluble portion of the image there may still remain some gelatin not reached by the light and the developer, and consequently soluble. It would be therefore useless to put the sheet bearing the image in warm water just as it was developed, because the image, also insoluble, would be "under-washed," and beyond possibility of recovering. This explanation is only necessary for the very few not acquainted with the principles and practice of the carbon process. In reality from this point I follow exactly all the rules of the carbon process,—that is, the gelatin surface of the paper bearing the image must be cemented to some impervious material and washed from the back or paper side until all soluble gelatin is removed.

Now what impervious material is to be chosen? This choice depends upon the destination of the developing image. In the case of negatives, glass is very convenient; and it may be used without any preparation, or it may be collodionized, or varnished with gum-dammar or other varnish, or waxed. Cementing the image is produced by putting the gelatin surface in contact with the support under water, and removing with a squeegee all superfluous water; when unprepared glass is used, it is advisable to leave the image there until it is dry; in all other cases only for a few minutes.

Next the glass, with the paper cemented to it, is plunged into warm water, and very soon the paper which is thus loosened can be stripped off, and all the soluble gelatin washed away, leaving only the insoluble portion forming the image. This is washed in cold water, and the negative is finished.

It will be observed that this negative, when used for ordinary silver printing, will give reversed images. This can be obviated by several means—by cementing the developed image to transfer paper, which is made by rendering the paper water-proof and greased on the surface (an excellent paper of this description is supplied by the Autotype Company, under the name of "flexible support"), and when the image is finished, to transfer it to glass, on which it will remain permanently; or by using a paper bearing a film formed of collodion or insoluble gelatin, or a combination of the two. In this case the image will be produced on the film, the paper being stripped off by rubbing turpentine on it as was indicated by myself for my sensitive negative tissue: the printing in this case can be done from either side. Lastly, the image can be developed on the collodionized glass, the glass being first rubbed with talc; it can then be backed with my previously described film-tissue, or with a sheet of gelatin, or the film can be made by coatings of collodion or gelatin, and, when dry, stripped. By either of these methods the negative can be reversed without any difficulty; but, for myself, I prefer to have it on the film, and this can be produced of sufficient thickness to form not only the substitute, but also the nearest approach in appearance to glass.

Now, when the method of obtaining negatives by this new system is explained, the question can be put, What advantage is gained? I reply, the advantages are many and important. With the certain quality of the emulsion on the glass, when compared with the same on the paper, the result is easier to obtain, and it is of superior quality on the paper.

Everybody who uses gelatin plates (and who does not use them now?) is familiar with the difficulty in estimating the exact exposure, and frequent failures are produced by over-exposure. Only a correctly timed exposure will give a negative possessing vigor and brilliancy: a slight over-exposure gives an image flat, weak, and veiled; this is the natural drawback of glass plates; it was known in the collodion time, but only the superior sensitiveness of gelatin made us fully acquainted with it. The very same gelatin emulsion on the paper does not produce the evil effects of over-exposure just described. This assertion is too important to advance without proving it by actual experiment. There is here a sheet of paper covered with gelatin emulsion, and a glass plate covered also with the very same batch of emulsion. In this black and opaque paper I cut holes, and by putting these simply made negatives, one in contact with the paper and the other in contact with the glass, I give very long exposures to the light. The image is visible in both cases. Next I develop the paper and the glass simultaneously in one dish. The developer is purposely made very weak and well restrained, in order to have the image coming up as slowly as possible. Let us now watch attentively the behavior of the two negatives: on the glass plate at first the image appears black, as normally it ought to be; but very soon we begin to observe that the portion of the plate totally protected from light by the opaque part of the black paper begins to blacken, forming a halo round every figure developed normally; this halo extends more and more as the developing continues. But, lo! another change. The original black image has turned into a white one, while the halo extends to almost the whole of the plate; and now the reversal of the image is complete. Meantime the paper-film image is free from blurring halo, and also is not reversed. Exactly the same happens when negatives are taken in the camera. Over-exposure produces blurring and fogging of the plate; this produces flatness; but, if the over-exposure is continued, partial and even total reversal of the image takes place.

What is the cause of these striking phenomena? A complete explanation can be made of halation and blurring, viz., the light acting on the gelatin surface penetrates it, and, being reflected from the back of the glass as well as being dispersed through the thickness of the glass, acts on the sensitive surface from the back, and hence the phenomena observed. As regards the reversal of the image, I confess I am not clear as to the cause why it does not take place on paper, and I hope that Captain Abney, who has studied this question, will be able to fill the gap caused by my ignorance. However, I take this opportunity to place before you the facts gathered during my investigation. I believe that the reversal of the image in the glass is due to the following reaction: By the action of light, part of the bromine forming bromide of silver is liberated. When the image is developed, in the first instance, it has a normal appearance; but the water of the developer subsequently forms hydrobromic acid, with the liberated bromine, and this acting on the previously precipitated silver forms again bromide of silver, which dissolved in the fixing solution is the reason of the reversal of the image.

Apparently the very same reaction must take place in the paper negative. However, from the different definite result I had doubts about it, until, upon making experiments similar to the one just described, the following incident happened. One of the persons present, by mistake, opened the printing-frame in the light, and this caused a small amount of light to act on the whole surface of the paper. In developing, that naturally produced general fog all over the plate. When the development was almost over, the fogged sheet was kept inclined during the examination, when, to our astonishment, the fog began to clear up, and this in such a manner as if some clearing solution was exuding from the developed parts only, and running in the direction commanded by the incline of the sheet of paper. This incident, purposely produced several times afterwards, taught me that on paper, as on the glass, the bromine liberated by light forms hydrobromic acid with the water of developer; but why it does not act on the developed image in the same way in the case of a glass support I am not able to account for.

Greater latitude in the exposure is not the only advantage gained by the new process; there is one more important still. Since gelatin plates came into general use, lowering of the standard of excellence has been observed in the results obtained; the last Exhibition, according to competent authority, is an illustration of this assertion. Equally good authority has found the reason of this in the impossibility to intensify satisfactorily gelatin negatives. I do not mean to insinuate that gelatin cannot give an intense negative—just the reverse; but the best negative by the wet-collodion process is generally produced when the first developed image is not sufficiently intense, but is subsequently brought to its final condition by intensification.

This mode of procedure, desirable also in the case of gelatin, cannot be resorted to, owing to the impossibility of intensifying these negatives satisfactorily, because silver-intensification stains the film all over, while the only available mercurial intensifications are to be discarded for different reasons.

Negatives produced by the process just described have no gelatin to be stained, and consequently are quite as fit for silver-intensification as the old-fashioned wet collodion. They permit also the application of several other systems of intensification not yet known, viz., when the negative is quite finished and on the plain glass surface, the application of any soluble coloring liquid stains the image a corresponding color, the intensity of which is in proportion to the thickness of the gelatin, and consequently in proportion to the action of the light. Very beautiful results can by these means be produced for other purposes than intensification, viz., for chromo-transparency, and they are especially very pretty for the optical lantern or the stereoscope. It is remarkable that, if the developed image is not very intense, the colored image has the appearance as if it were formed entirely from the color used, to the exclusion of the color of precipitated silver.

There is still another mode of changing the color of a developed image. I found that there are many substances that can be mixed with gelatin emulsion without producing any action on the quality or sensitiveness. If ordinary water or moist color is ground up in the emulsion, the developed image will retain all this color, while in other portions it will dissolve, together with the gelatin containing it. By this means a great variety of color in the image can be produced, some of very pleasing effects, closely resembling the silver-albumen print, toned or untoned. This can be applied simply to confer greater intensity in the negatives; or it can be used as a print when developed on paper or canvas. All other modes of intensification known can be applied in this case, but, among others, treatment with permanganate of potash, giving such a satisfactory result in carbon transparency, is recommended.

Now I proceed to show you the manipulation of the process in practice.

This sheet of paper bears a developed image with pyrogalol. One half of the image is fixed with hyposulphite of soda, while the other half is left unfixed; cemented with the squeegee to the surface of glass, it is immersed in tepid water: on this occasion all the rules that are good for the carbon process are literally applicable in this process; for instance, the water must not be too hot. The paper is pealed off, and you observe how the still soluble gelatin is running down. Part of the image is purposely left unfixed; white bromide emulsion, when running under the action of warm water, enables you to watch the rapidity of the solution and also the moment when the development is completed. Now it is complete, it cannot escape observation that the unfixed part is a great deal more intense than the fixed part; evidently there is something more left on the image than pure metallic silver—something soluble in the hypo; however, the lights are clear, and this something is not affected visibly by light, so that in many cases, when intensity is desired, fixing can be usefully omitted.

In describing the mode of working and the advantages of the new process for negatives, I must mention that to use paper in the camera some alteration in the apparatus must be introduced: the ordinary slides, although excellent for glass plates, are not of the best form that can be desired for paper negatives. I have no doubt that in the old pre-collodion epoch of photography the users of Callotype paper knew also the best slides for it, and perhaps among an old long-forgotten bundle of apparatus a useful hint might be discovered for a practical form of the slide most suitable for sensitive paper. It was not my good fortune to come across such a valuable hint, and therefore I had to design one for myself. It is out of the question to put the paper between two glasses; glass had better be eliminated altogether. After many trials I have come to the conclusion that the roller-slide is the most convenient system. One I described here, and used by many in connection with my sensitive negative tissue for the last seven or eight years, need not require being described again. A band of paper sufficient for many negatives can be successively presented for exposure in the camera by acting on the projecting knob of the roller. In my original roller-slide an opening in the shutter, protected with orange glass, permitted the watching of the number printed on the boundary of every length of negative. With a very sensitive gelatin tissue, which I perfected some time ago, this opening was inadmissible, since the light passed through the glass and ruined every negative. I had then recourse to an electric bell-alarm, which sounded when each negative was completely rolled away from possible harm: this system, tried during my last travel in Russia, permitted me to expose over three hundred negatives with perfect success. Recently, however, I have constructed this model before you, in which the position of the paper is recorded in a much more simple manner, and one that cannot possibly get out of order. On the boundary of each length of tissue answering to the size of the negative a hole is perforated; a spring acting on a system of levers gives notice of the position of the paper by projecting a brass knob, which disappears instantly the hole is passed. A revolving shutter, instead of a sliding one, is another very useful innovation.

Whilst considering that the roller-slide is perfection for out-door work, I must admit that it has certain disadvantages when it is used at home, as, for instance, the necessity for cutting out every negative for development, and then the joining the band again is troublesome. Under these circumstances I have constructed this slide, which will take a flat sheet of paper: it must be considered only as a rough model, but slides on this principle will also prove useful in the field, being very light and only one-eighth inch in thickness.

It now remains for me to give an outline of the application of my invention to other branches of photography. You observed in the negative just developed, that the image has considerable relief, and that this relief is greater in proportion to the intensity of the image: this suggests its application to the Woodbury printing-process. The emulsion for this purpose must be in a thick layer, and not so opaque as to enable the light to act deeper, and by these means produce a greater relief. The image need not be reversed, as is the case with the ordinary process. The same image in relief can be utilized for numerous photo-engraving processes, having this advantage over chromated gelatin, that it can be produced quickly, and even by artificial light. Grain, when necessary, can be produced by mixing suitable substances with emulsion.

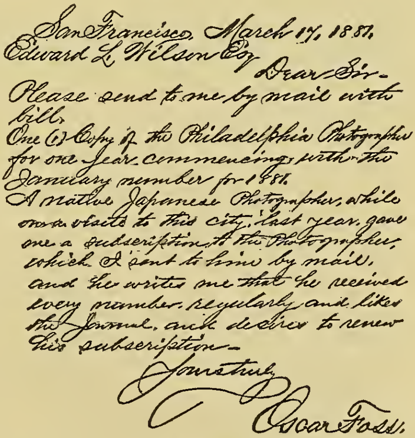
Another important application of this invention is to the photo-ceramic or burnt-in photographs on enamel porcelain or glass. Vitrifiable powder is mixed with the emulsion, which emulsion in this case is principally that giving only a very thin image in development; the image, when developed on the suitable enamel porcelain or glass surface, is fluxed and submitted to the action of heat in a suitable furnace. It is of the greatest importance, but it is also of considerable difficulty, to be able to eliminate the gelatin from the image before it is put into the furnace, because, if this is left, the whole is raised in large blisters, and in this condition cannot be burnt in. In this invention, however, when the emulsion gives only a very faint image, the quantity of gelatin left is so small that it can be carbonified without the bad effect of blisters and cracks: this enables me to recommend the process. I pass for examination this glass plate on which the image in vitrifiable powder was produced: part of the plate was fired on the blow-apparatus and is totally vitrified; the other part, which is much darker, not having been submitted to sufficient heat, shows how perfectly all the gelatin of the image is carbonified without being cracked or blistered; lastly, the lower corner shows the image not acted upon by heat. My last remark is as to its application for phototype printing, having observed that the part exposed to light takes a greasy printing-ink; a very easy application to this kind of printing can be imagined.

FROM EAST TO WEST.

Our Magazine at Home and Abroad.

In its comparatively long life, the *Philadelphia Photographer* has not won so many testimonials and kind words as it has during 1881; and for years it has not grown so rapidly as it has this. It goes into almost every country of the world. One of our most enterprising agents, Mr. Oscar Foss, the well-known San Francisco stock-dealer, sends us a letter which we value enough to photo-engrave and place on record as below.

The name of the Japanese photographer is Mr. K. Sudzuki, Tokio.



San Francisco, March 17, 1881.
Edward L. Wilson Esq
Dear Sir-

Please send to me by mail with bill,
One (1) Copy of the Philadelphia Photographer for one Year commencing with the January number for 1881.
A native Japanese Photographer, while on a visit to this city last year, gave me a subscription to the Photographer, which I sent to him by mail, and he writes me that he received every number regularly and likes the Journal and desires to renew his subscription-

Yours truly
Oscar Foss.

We hope our Japanese friend's appreciation of our magazine may not shame those who "cannot afford to take a journal;" but surely it ought to.

In a subsequent letter, Mr. Foss writes: "By reference to my book, I find that I have obtained a larger subscription for the *Philadelphia Photographer* since January than for any previous year from January to December. These subscribers are from all parts of California and the Pacific Coast, Mexico, Central America, Sandwich Islands, Japan, and various other places; and I have no doubt but that I shall considerably increase the list before the close of the year." *Good!*

THE QUANTITY OF SILVER IN A BATH.

Queries.

WILL you kindly give me information, through the *Philadelphia Photographer*, or otherwise, as to the following: I have 15½ ounces of fused nitrate of silver from an old negative bath; is that all, or very nearly all, silver? And will it make 186 ounces of solution 40 grains to the ounce?

No nitrate of baryta or other chemical, excepting a drop or two of ammonia, before sunning and acid when in use, and salts from the collodion, has ever been in the bath.

I don't like to trouble you, but I can find no solution in any of my books. I cannot see *why* there is not nearly 15½ ounces of silver there; but where I am puzzled is to remember when I ever put that amount of silver in the original solution.

Perhaps it would be of interest to others to publish your reply; still, I may be the only one in the dark.

Respectfully yours,
E. L. RUSSELL,
Blossburg, Pa.

Answers.

In reply to the questions of Mr. E. L. Russell, of Blossburg, Pa., I would say:

1. 15½ ounces of fused nitrate of silver, if pure, contain the same amount of nitrate as the crystals.

2. 15½ avoirdupois ounces of fused nitrate of silver will make about 170 fluid ounces of bath solution, 40 grains to the ounce.

3. Old baths may contain foreign salts which would add to the weight of the fused mass, but if the bath has been kept free from such additions as nitrate of barium, etc., the fused mass, after the organic matter has been well burned off, will be very nearly pure nitrate of silver. It is well, however, not to prolong the fusing more than necessary to destroy organic matter, as an excess of heat may decompose some of the nitrate of silver and form nitrite of silver, which is objectionable, as likely to cause fog. The fused mass, after dissolving in pure water, should be filtered and acidified with a few drops of C. P. *nitric acid.*

4. The unlooked for large amount of silver in the old bath may be the result of adding nitrate from time to time—if not due to the original outlay.

Yours truly,
GEORGE BRINTON PHILLIPS,
Laboratory, No. 8 N. 7th St., Philadelphia.

PHOTO-TELEGRAPHY.

BY FRED. E. IVES.

HAVING read accounts of attempts which have been made to transmit photographic images by telegraph, but which do not appear to promise very satisfactory results, I wish to offer a suggestion which I believe is entirely new, and must, if intelligently carried out, lead to a practical and useful process of photo-telegraphy.

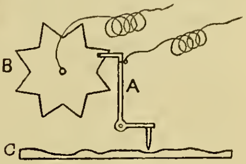
In the experiments referred to, the photographic image is reproduced by the discoloration of chemically-prepared paper by the electric current, which is made to vary in intensity according to the variations of light and shade in the photograph. Each point of the photograph is reproduced separately, one after another, a suitable mechanical device being employed to secure the required regular, simultaneous motion of the photograph and the metal point from which the electric current passes through the prepared paper. The part of the operation in which the chief difficulty lies, is the regulation of the intensity of the electric current by the variations of light and shade in the photograph. This has been very imperfectly accomplished by projecting an image of the illuminated photograph or object upon a selenium cell which is placed in the electric circuit, and which has a greater resistance for the electric current when shaded than when exposed to light. The results obtained are not only unsatisfactory in themselves, but make it appear doubtful if the use of the selenium cell will ever admit of real practical success, at least over any but a very short circuit.

My idea is to do away with the selenium, and to control the passage of the electric current by a purely mechanical device, the action of which may be regulated by the aid of a *photographic relief*.

The simplest method, theoretically, would be to produce a gelatin relief like that employed in the Woodburytype process; then let the handle of a stylus, which is drawn across its face, press against one of Edison's carbon rheostats in the electric circuit. The resistance of the carbon rheostat varies greatly with slight variations of pressure. The arrangement should be such that the pressure, and consequent intensity of the electric current, would be greatest where the photographic relief is highest, representing the blacks of the picture, and least where it is lowest, representing the whites. This method would certainly operate successfully; but it is open to two objections: the gelatin relief cannot be made quickly, and the rheostat might not operate successfully in a long circuit. In order to make the operation quicker, a relief must be made by exposing a thin, even film of bichromatized gelatin on plate-glass, under the negative, swelling it in water, and taking a cast in plaster-of-Paris. Such a relief may be made and surface hardened with silicate of potash, from a negative furnished, ready for use in half an hour. It will not bear much pressure from a stylus drawn across its surface, but will bear, with a rather blunt stylus, all that is required to operate successfully a device which I am about to describe.

Since the amount of electricity passing over the wire during a short space of time is what decides the amount of decomposition and coloration in any point of the sensitive paper, it is evident that we may substitute for the unbroken current of varying intensity an *intermittent* current, the circuit being broken and completed again a number of times in each second, while the proportionate length of the makes and breaks is regulated by the position of a small lever against the side of V-shaped teeth on a revolving-wheel, as seen in the figure.

The lever A completes the electric circuit by touching the side of the teeth of the metallic wheel B. B revolves at a regular rate of speed. When elevations on the relief C lift the stylus and move the lever towards the base of the V-shaped teeth, it is evident that the amount of electricity passing over the wires during each revolution of the wheel will increase, and *vice versa*.



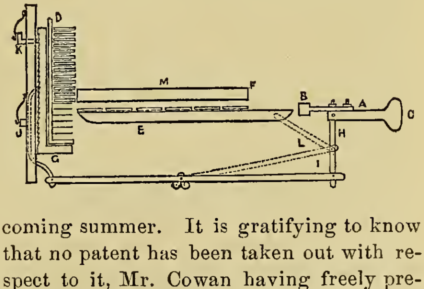
The employment of the plaster relief, as above described, would make it possible to prepare quickly for transmitting the image, while the contrivance described for regulating the passage of the electric current would admit of the use of a powerful current, insuring success over comparatively long circuits.

It is impossible for me to make an experimental application of these ideas at present. I give them out merely as suggestions which I believe may lead to something quite practical.

Philadelphia, June 1st, 1881.

COWAN'S MACHINE FOR LEVELLING AND RACKING PLATES.

We now present our readers with a diagram showing the nature of the working parts of this ingenious piece of mechanism, and we anticipate that it will prove a great boon to plate manufacturers during the coming summer. It is gratifying to know that no patent has been taken out with respect to it, Mr. Cowan having freely presented it to the photographic public, although



many inventions of less merit and practical utility are subject to patent rights.

A, block of wood working horizontally in guides, C being a pushing-piece for the hand of the worker. The return motion towards C is effected by springs not shown in the cut.

B, adjustable buffer, so fixed on the block A that when this is pushed forward to its limit, as at F, the distance between B and the back of the rack D is exactly measured by an ascertained number of the plates which are to be coated.

E, one of a pair of planed and levelled strips of iron, on which the plates ride forward towards the rack. Adjustable side pieces prevent any plates working out of a direct line while being pushed along the strips E.

G, a carriage or support for the plate-racks, this being raised one degree each time the block A is drawn back by its springs; the action of levers H, I, and the lifting piece J, being made sufficiently clear by the diagram. The detent, K, serves to prevent the return of the carriage during the downward motion of J. When a fresh rack is placed on the carriage G, the detents K and J are drawn back by hand. The dotted lines at L show the position of the lever H, and part of I, when the sliding-block A is in its most forward position.

M, a metal box which may serve as a cover in cool weather, or as an ice-box in hot weather, so that the emulsion shall become set before the plates reach the rack. In actual practice the bed E would be ten or twelve feet long, so that one end of the machine could be in the coating-room, and the other end in the drying-room.

D, one of a set of movable racks, formed with light shelves or projections to take the plates. The length of these projections will vary according to the size of the plates to be coated; but when small plates are being operated on, the rack must be placed more forward on the carriage, and the buffer B must, of course, be adjusted to the required position.

To use the machine, a rack is placed in position on the carriage, this being lowered by drawing back the detents K and J. The rails, E, are next covered with plates, and the sliding-block A is pushed forward, this action serving to put the farthest plate on the top shelf of the rack. The springs governing A now come into action, drawing it back, and at the same time raising the rack carriage one degree, while a space is left for the next plate between F and B. The same series of actions is repeated until the rack is full, a circumstance which is announced by the ringing of a bell, when the full rack is taken to the drying room, and a fresh one placed on the carriage of the machine.

In order that the forward motion of A may be easily made by a person who has just placed a plate between F and B, Mr. Cowan intends to arrange a kind of bell-pull action conveniently placed for the purpose—*Photo. News.*

ANOTHER PRIZE *

To Prove the Superiority of Dry Plates.

Cramer & Norden offer a prize of Fifty Dollars for the best set of negatives, not less than five in number, on dry plates of their manufacture; size not less than cabinets, or larger than 8 x 10. The President, Secretary and Treasurer of the Photographers' Association of America are requested to appoint a committee of three to act as judges.

The negatives and proof of same must be sent prepaid to Mr. G. A. Douglass, care of Mr. L. W. Seavey, No. 8 Lafayette Place, New York, for examination at the coming Convention.

They must be marked on a piece of paper, gummed to the corner, "Cramer & Norden's plate," and the name of the artist. The negatives will be used to illustrate the photographic journals, provided the exhibitor does not object.

Cramer & Norden,
St. Louis, Mo.

Wilson's *Photographics* has been received with enthusiasm by its buyers, and a part of what a few of them say is included in the new advertisements. Some very instructive reviews have been given also by the magazines, which will be given in our next number.

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* We are asked to publish this for the good of the fraternity.—Ed. *P. P.*

FOR THE THOUGHTFUL CONSIDERATION OF THE FRATERNITY.

BY MRS. E. N. LOCKWOOD.

ALL public enterprises which depend on the patronage and support of many numbers will sooner or later fail, unless they are proven to be a benefit to *each* particular supporter. They must have something more than the elevation and advancement of art in a general way, or for a certain few.

In this world, where we are surrounded by many uncertainties and an environment of many necessities, all more or less depending for relief on our ability to obtain the use of dollars and cents, it is not strange that a financial interest will hold and win the active enterprise of the majority of humanity, where they would stand back and question of what use anything could be to them, when only the acquisition of intellectual or spiritual advancement were to be the ultimatum of any theory, or adventure, and experiment.

Our National Photographic Association started out with the belief that the human was advanced enough to see the benefit to art science, as well as greater individual progress, in associated effort, and that every one interested would do willingly whatever they could towards sustaining such an institution; but after a few years of usefulness it sank into oblivion, not because it was not accomplishing the good desired, but from inertia and lack of enterprise, because there was no *individual financial interest* to induce *prompt payments from each one of their annual dues*, and also the addition of new members; the majority seeming to forget they had any duty to perform towards assisting the officers of the Association in their efforts to make our annual gatherings and exhibitions a success.

In view of the short-sightedness and constitutional apathy of the masses, who only look at the external side of life, measuring everything in a monetary way, I suggested to the Photographers' Association of America, in the third year of its age, that they connect a mutual Life Insurance League with their other business, thereby giving *one* plausible reason to every mind why it is good to belong to an association of our fraternity. And I believe also that something of this kind will prove of great benefit to the Photographers' Association of America, as well as to the members. I hope to hear from others on this subject before our next meeting in August.

RIPON, WIS.

SOCIETY GOSSIP.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—A regular meeting was held at Douglass, Thompson & Co.'s warehouse, 229 and 231 State Street, on Wednesday evening, June 1st, 1881. Mr. C. Gentile, Vice-President, in the chair. Meeting called to order at 8 o'clock. On motion, the reading of the minutes was dispensed with.

Mr. E. G. Robinson, of Michigan City, Ind., was elected a member.

The Committee appointed at last meeting to make arrangements, on behalf of this Association, for the reception and entertainment of such delegates to the approaching Convention of the Photographers' Association of America as may pass through this city *en route*, presented its report. The Committee consists of Messrs. A. Hesler, H. G. Thompson, and Joshua Smith.

The report stated that the Committee had met at Mr. Hesler's gallery, and decided to recommend that badges bearing the Association monogram in gold, on blue silk, be obtained for distribution to such of the members as wished to have them, more especially those who would take part in the entertainment of the visitors, and that a banner be provided, bearing the name of this Association and the monogram of the Photographers' Association of America, for the use of that section of this Association which will go to New York as a delegation to the Convention.

Mr. Smith very generously agreed to donate the silk for this banner, and Mr. Paul Brown, with equal liberality, offered to paint it at his own expense, so that it only remains for some one else to provide the staff, and the Society will be provided with a banner free of cost.

Mr. Hesler stated that he had seen the management of the Palmer House, in order to ascertain if a room in that hotel could be obtained for Society headquarters during the stay of the Western delegates in this city, and those gentlemen had met him in the most liberal manner, and offered to place a club-room at the disposal of the Association, provided reasonable notice be given of its being needed. The report was accepted and Committee continued.

In connection with the report, Mr. Thompson remarked that it would be necessary to appoint sub-committees to meet delegates at the various depots, to conduct them to hotels. Mr. Greene thought next meeting would be early enough for this.

Mr. Smith moved that, in consideration of the depleted condition of the treasury, owing to the fact that so many members were in arrears for their dues, the cost of badges be defrayed by subscription. After some discussion this motion was laid on the table.

Mr. Greene.—Two months ago I read a little article here on the variations of quantity of each ingredient in the alkaline pyro developer as given in the different published formulæ. Owing to the large amount of business then before the meeting I did not take time to say all I wanted to, and now I would like to read you two or three additional formulæ that have since come under my notice, and make a few general remarks on the subject. First, here is Cramer & Norden's new developer:

Solution, No. 1.

Water,	1 ounce.
Pyro,	3 grains.

Solution, No. 2.

Water,	1 ounce.
Bromide,	1.6 grains.
Ammonia,	4 drops.

Solution, No. 3.

Water,	1 ounce.
Bromide,	8 grains.
Ammonia,	4 drops.

Mix equal parts Nos. 1 and 2. If properly timed, this will give sufficient intensity; but if, from over-exposure or a too evenly lighted subject, the image comes up flat, add more or less of No. 3. Now it has been generally supposed that pyro gave intensity, and the usual method for gaining increased density is to increase the amount of pyro, with or without an addition of bromide; but here you have the reverse—a large addition of ammonia and a correspondingly large increase of restraining bromide, while the pyro is absolutely weakened by the addition of the extra amount of water. And, having given this new system a fair trial, I feel obliged to say that I believe it to be the right one. It is now nearly a year and a half that I have been working dry plates exclusively, and my experience has been that, by adding pyro to strengthen, you almost inevitably stain your shadows. By using an extra dose of ammonia, with plenty of bromide instead, you avoid this.

My theory of the matter is this: that the ammonia acts most energetically on the high-lights, while the bromide is most effective on the least lightest parts of the picture—*i. e.*, the shadows—while it does not seem to have much restraining effect on the high-lights. The idea of adding more pyro to intensify an over-exposed, and consequently flat, negative, seems to me opposed to common sense; for it will doubtless be admitted, that if your plate had been under-timed the original dose of pyro would have been sufficient, therefore why should more be needed to develop a plate which has had a longer exposure? The fact is, there is plenty of pyro there, but its tendency is to develop all over the plate, and you cannot carry your development far enough to get intensity in high-lights without hopelessly fogging your shadows; but, leaving the pyro as it is, and adding at the same time both ammonia and bromide, you accelerate the reducing action in the high-lights and retard—I may say, entirely prevent—any further effect upon deep shadows. In conclusion, I wish to recommend this method of working as giving finer results, and at the same time being more economical.

Mr. Smith.—I am puzzled to know why we should be so particular as to quantity of ingredients in the developer, when we consider how much more of each we usually take than is really necessary to develop a plate. My experience has been that I can work almost haphazard by using plenty of each ingredient, and especially taking care to have a liberal dose of bromide. Plates prepared with an excess of bromide may, if exposure be correct, be developed without any bromide; but with those otherwise prepared, it is rather risky to attempt it. My idea is, that if your developer is weak, that is much diluted with water, your negative will be weak, and *vice versa*.

Mr. Gentile.—Don't you find some brands of plates will hardly stand any ammonia at all without fogging?

Mr. Smith.—Yes.

Mr. Greene, in reply to Mr. Smith, said it was not his intention to advocate great nicety in proportions, he merely read the formulæ as he found them. Nelson's developer he had found to work well with all brands of plates. He varied proportion to suit circumstances, and kept a bottle of bromide on hand for emergencies.

Mr. Smith held that just as much detail in shadows could be obtained with a large proportion of bromide in developer as with a little, provided you allow time enough in development.

Mr. Greene maintained the contrary.

Mr. R. M. Edgeworth wanted to know the opinion of the members as to which method of development gave the best results, pyro or ferrous oxalate.

Mr. Gentile thought that would depend somewhat on what brand of plate you were using.

Mr. Smith considered pyro best for hard plates, and ferrous oxalate for soft ones, such as the Eastman. The oxalate did not seem to have the same penetrating power with hard plates, especially those containing chrome alum, as pyro. Such plates he found to develop very slowly, and to be liable to want of density, if the former were used.

Mr. Gentile wished to know how Mr. Smith liked the citric acid developer.

Mr. S. replied that he was using it altogether, and was much pleased with it. Got formula from *British Journal*, but varied proportions somewhat. His formula, as he was now using it, is as follows:

Solution, No. 1.

Pyro,	1 ounce.
Ammonia Bromide,	1 "
Citric Acid,	$\frac{1}{4}$ "
Water,	7 ounces.

Solution, No. 2.

Liquid Ammonia,	$1\frac{1}{2}$ ounces.
Water,	7 "

Use $\frac{1}{2}$ drachm of each solution to 5 to 8 ounces of water.

Mr. J. F. Edgeworth thought this pyro and citric acid developer would soon be the only one used. It works nicer than anything he has tried. But ferrous oxalate worked fully as rapidly with him, and it was difficult to say which was the better, all things considered. Not much choice.

Mr. Greene.—I have here, in the last number of the *Bulletin*, a little article I should like to read to the meeting.

(Mr. Greene here read in full the "Prize Offer" of Messrs. Anthony, in the May *Bulletin*, page 145.)

Now, I wish to point out right here, that this is simply an advertising dodge, similar to the prize offers made at conventions of the now defunct N. P. A., and which always seemed to me derogatory to the dignity of that institution, and I, for one, object to the new Association lending itself to anything of the kind. You will observe that the negatives *must* be made on Eastman plates, and the prints on certain brands of paper, for all of which Messrs. Anthony are agents.

Now, there can, of course, be no earthly objection to any business house offering prizes in this way; it is a perfectly legitimate method of advertising; but there is an objection, and a grave one, to the Photographers' Association of America lending its authority and prestige to any such business. Of course, it would greatly help the sale of the Eastman plates, especially with the more ignorant class of photographers, to be able to say that the grand prize of the Photographers' Association of America was awarded to a negative on the Eastman plate. But I do not think it will tend to advance the dignity or status of the new society, or to gain for that society the support and co-operation of the better class of photographers throughout the country.

If the Photographers' Association of America is to be run in the stock-dealing interest, as the now deceased National Photographic Association was, the sooner it is disbanded the better. My object in bringing the matter before this Society is, that those of us who go as delegates to the New York Convention may go prepared to vote down any schemes of this kind.

This seemed to be the general sense of the meeting, but Mr. Smith remarked, with a delicate touch of irony, that Messrs. Anthony would show very poor business capacity by offering prizes to advertise *some one else's goods.*

Mr. Greene inquired if any one present had any experience of gelatin emulsion containing excess of silver nitrate. He had read that the excess would combine with the gelatin in some way, and could not be got rid of by washing, thereby causing fog.

Mr. Smith replied that he had used emulsion containing excess of silver, and also some containing excess of bromide, and of the two preferred the former as giving a denser film. But if excess of silver be present, you cannot wash the emulsion with bichromate of potash, according to Capt. Abney's formula, as the result would be formation of chromate of silver, causing fog and very insensitive plates.

On motion adjourned to first Wednesday in July.

F. H. Davies, *Secretary.*
No. 78 Michigan Avenue.

Boston Photographic Association.—The regular monthly meeting was called to order by President Foss, fifteen members present; the reading of the records was omitted on account of the absence of the Secretary. Mr. Ritz was appointed Secretary, *pro tem.*

A discussion on dry-plates took place, in which Mr. Richardson gave some very interesting results of his experiments; Messrs. Rowell, Durham, and Gline also took part in the discussion, also showing some fine specimen prints made from dry-plates. A communication was read by Mr. Durham, from Mr. Clifford, of St. Johnsbury, Vt., stoutly advocating the dry-plate process at this point. President Foss was obliged to leave, and invited Mr. Hastings to take the chair. No other business coming before the meeting, it was voted to adjourn until the first Wednesday in September.

E. F. Ritz,
Secretary, *pro tem.*

Photographic Society of Philadelphia.—Minutes of the regular monthly meeting held June 1st, 1881. The President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read, and, after a correction by Mr. Browne, were approved.

The Secretary read the articles published in the *Photographic Times* in reply to the Society's letter concerning the priority of invention of the Partridge holder.

The subject of Mr. Partridge's claim as originator of the "Double Dark-Slide of the Future," was then discussed at some length. The general tone of the remarks being to the effect that Mr. Partridge did design the first holder of this pattern used in this country, and it was generally believed by the members that the Scovill Manufacturing Company had gotten their ideas from a sample holder sent them by a Philadelphia party who was desirous of having similar holders made.

Mr. Fox moved that a committee of four be appointed to investigate the claims of Mr. Partridge, and to examine the holders in question. The Chair appointed Messrs. Fox, Townsend, Browne, and Pancoast.

Mr. Barrington, of the Excursion Committee, reported that they were unable, as yet, to decide upon a trip. On motion, the subject of the annual excursion was referred back to the Excursion Committee, for further consideration.

Mr. Wallace, in a few remarks on the use of alum in the printing bath, alluded to its usefulness in hardening the albumen film, and preventing the bath from dissolving it.

Mr. Browne exhibited a remarkable negative, made on a collodion emulsion (Partridge's) dry-plate, one year old, with a Dallmeyer Rapid Rectilinear lens, full aperture; exposure, one-third of a second. The subject being a boat in rapid motion.

The Secretary was, on motion, instructed to call a special meeting on the 15th inst., to hear the report of the Committee on "Holder," and a special meeting to hear Excursion Committee's report, on order of the President.

On motion, adjourned.

C. R. Pancoast,
Secretary.

THE EDUCATION OF PHOTOGRAPHERS.

GAYTON A. DOUGLASS.

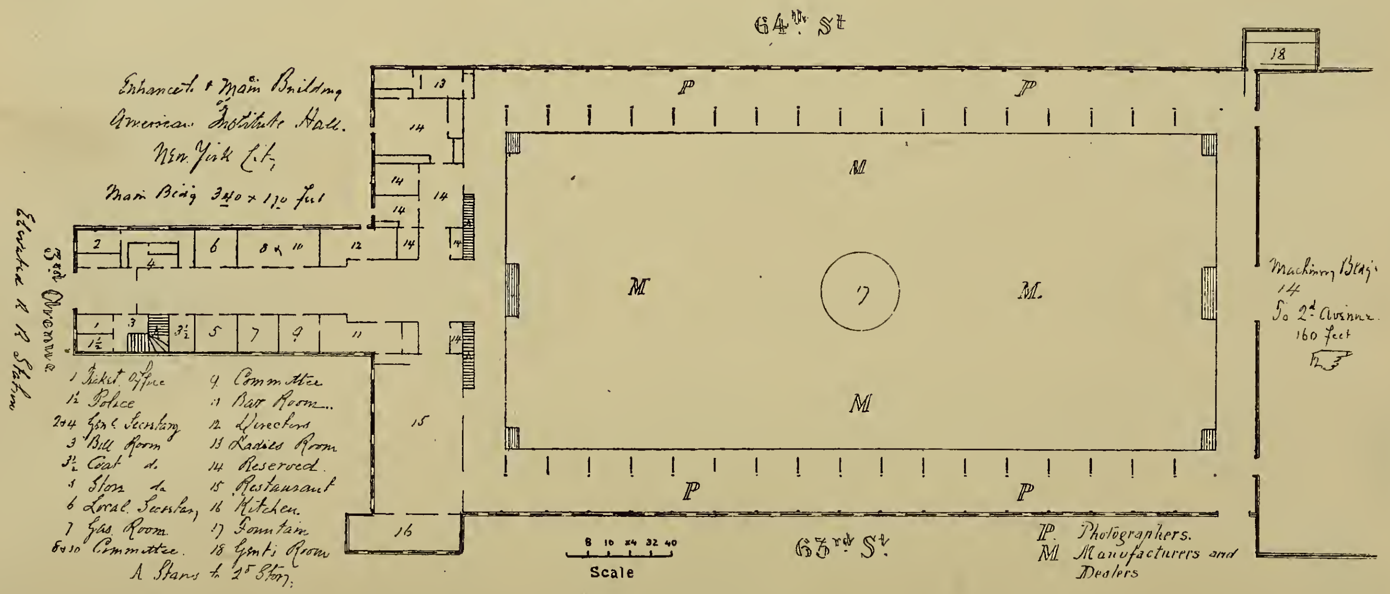
Why is it that in our profession—and I use the term to embrace all who in any way depend upon photography for a business—there is so little sympathy for educational work? We find no spontaneous or enthusiastic effort general in its ranks. Anything that tends to enlighten, or in the least measure broaden, the knowledge of those engaged in our art science meets with opposition rather than hearty greeting and assistance. This may seem harsh to many who, themselves earnest and faithful, work hard to progress; but it is nevertheless a severe truth. Those who would plant the tree of knowledge and labor unceasingly to nourish its growth, are met on every hand with discouragements, the charge of mercenary motives, and that their work is only that they may make merchandise of its fruit and wax rich. My duties pertaining to the advancement of the interests of the Photographers' Association of America—an organization founded wholly for the educational welfare of the fraternity—has many times brought home to me the unpleasant fact that the work of education for photographers is not wholly popular. To those who make a business of serving the fraternity with their requisites, I would say a few words. I was asked by a dealer, why I gave so much attention to this work, and what was gained by educating photographers? of what benefit associations and societies were? And many questions of like import. It is not a difficult problem for one wholly in accord with his profession, and who loves knowledge for its own sake; but it may be obscure for those who weigh everything in the scale of money value; and yet to those, if they could but see it, the better education of the craft is an important factor in an increased worth as patrons. Let us quiet our questioning friend and others who are agitated lest the photographer should grow in knowledge, by observing that the greater the progress of the profession in the study of their art science, bringing them to a higher plane of excellence in their products, with the natural outgrowth of an ambition to advance, makes better patrons, with an increased demand for the essentials of their calling. That this is true, a moment's reflection will show. Many refuse their aid and countenance to educational work from a narrow view of the situation, and reason that they can have no interest in it because no returns can be expected. Such evidently have given the subject no thought, for *it is true* of every industry of life, that education brings richer returns than ignorance.

A photographer, educated and cultured, becomes more than a mere money-getting machine; he develops into a valuable factor of society, and enriches the world by an example that will be studied and followed. Left to themselves, few make an effort to advance, but stimulated by association and urged forward by competitive example, they seek the avenues of knowledge, and soon learn that they are progressing, and once started they seldom fall back into old habits. We urge, as a valuable and important aid in this work of progress and education, the support, maintenance, and development of such an organization as the Photographers' Association of America, and instead of being a stumbling-block, by indifference towards these efforts made for advancement, fault finding with the methods adopted, and unkindly criticism of your fellow craftsmen, be generous towards those who seek to benefit the profession, and do a little towards aiding in the good work which engages the attention of such in the fraternity as believe in a higher standard for photographers.

Retouching Carbon Prints.—Among the different methods tried for retouching carbon prints, the best consists, says Mr. Borlinetto, in using the coloring matter itself of the gelatinized paper, which is easily dissolved by wetting it with water acidulated with acetic acid, to which are to be added a few traces of chrome-alum at three per cent. When the retouching is dry, it may be placed in the bath without injury to the color. This mode of retouching is very useful, especially for double transfer prints.—*Bulletin Belge.*

SECOND EXHIBITION OF THE P. A. OF A.

Plan of the Exhibition Space.



This Exhibition will open in the Building of the American Institute, New York City, on the 16th day of August, 1881.

Photographs will be exhibited on Screens 8 feet by 8 feet at P P (see diagram), well lighted by skylights and side-windows.

Apparatus, Chemicals, Frames, etc., etc., will be arranged at M M M M, around the fountain.

No entrance fee will be charged, but Exhibitors must be contributors to the treasury or members of the Society (Employers, $2.00; Employees, $1.00).

For space, address, L. W. Seavey,
8 Lafayette Place, N. Y.

For membership, address, Gayton A. Douglass,
229 State St., Chicago, Ills.

All photographers in the United States and Canada, and the following workers in photography, are cordially invited to exhibit:

Dealers in Photographic Materials.
Publishers of Books on Photography.
Manufacturers of Photo. Lenses.
Manufacturers of Photo. Chemicals.
Manufacturers of Photo. Glassware.
Manufacturers of Photo. Glass.
Manufacturers of Photo. Furniture.
Manufacturers of Photo. Backgrounds and Accessories.
Manufacturers of Photo. Cutting and Mounting Apparatus.
Manufacturers of Collodion.
Manufacturers of Dry Plates.
Manufacturers of Ferro. Plates.
Manufacturers of Cameras.
Manufacturers of Camera Shutters.
Manufacturers of Albumen Paper.
Manufacturers of Vignetting Apparatus.
Manufacturers of Retouching Machines.
Manufacturers of Retouching Pencils.
Manufacturers of Cards, Mounts, etc.
Manufacturers of Envelopes.
Manufacturers of Lanterns and Lantern Slides.
Manufacturers of Outdoor Outfits.
Manufacturers of Passepartouts.
Manufacturers of Frames.

Solar Printers, Printers for the Trade, Negative Retouchers, India Ink, Crayon, Pastel, and Water-color Painters and Finishers, etc.

The Sessions of the Convention will be held in a partitioned space of the main room, northwest corner, seating 800 persons, affording a perfect view of a fully equipped Hayes sky-light and dark-room.

The offices of the Directors, Secretaries, etc., will be at the right and left of the main entrance on Third Avenue.

A restaurant within the building will be in operation during the Convention.

The trains of the Third Avenue Elevated Railroad will stop at their special station in front of the building.

Photographers will have better accommodation than at any previous exhibition, and they are earnestly requested to make a grand display of their best work. All visitors admitted without charge.

The 50th Annual American Institute Fair will commence about September 14th, and many of the exhibits can remain for it, thus placing them before thousands of the citizens of New York and strangers from all parts of the country. While asking for full exhibits, the managers would say, bring only your best.

A Museum of curiosities will be an interesting feature. Photographers and friends are invited to bring or send fine old daguerrotypes, curious old apparatus, freaks in negatives, and novelties new or old of any sort connected with the art.

A map of the city, with hotels, etc., railway and steamboat routes to adjacent summer resorts, will soon be published.

As the Exhibition opens on the morning of August 16th, at 10 o'clock, all exhibits must be in place the day previous.

All packages sent by express or freight must be prepaid, addressed

L. W. Seavey, *Local Sec'y*,
American Institute Building,
3d Av. and 63d St., New York City.

Ample time should be allowed in shipping for the arrival of packages in New York six days in advance of the opening.

Applications for space should be sent early by mail.

L. W. Seavey, *Local Sec'y*,
No. 8 Lafayette Place, New York City.

PERTAINING TO THE

The Permanent Secretary, Mr. G. A. Douglass, and the Local Secretary, Mr. L. W. Seavey, are both heard from this month with reference to the arrangements made for the great Convention in August. It is already announced that the proceedings begin Tuesday morning, August 16th, to be continued until Saturday, inclusive.

Arrangements are being completed for a course of instructive lectures on various topics; for practical demonstrations in lighting and posing, and in several other departments of operative photography. The Exhibition will doubtless be an unusually fine one. But better than all these will be the opportunity which photographers will have of meeting each other to compare notes, to quiz one another, and to give out and draw out practical information from one another. The advantages of such contact cannot be over-estimated. It will have its benign effect upon the future of our art, just as sure as it takes place. It is *bound* to do good.

Permit a gentle suggestion therefore, that if you go to the Convention at all, that you go for educational purposes only, and frown down any effort to use the Convention for any other end. Those who are arranging for your welfare have the earnest desire that the result may be entirely beneficial for each member, and that he will feel well repaid for coming. *Come*, then, and share what has been prepared for you, and come to give out of your knowledge whenever and wherever you find one less favored than yourself. Try it once, and see how much substantial pleasure it will give you. Oh! come. We hope to give the programme in our next number. Apply for your space, and get ready.

ACTIVE OFFICERS.

All over the country the Vice-Presidents are at work completing low-fare railroad arrangements, and drumming up new members. Mr. D. Bachrach, Jr., Vice-President for Maryland, held a meeting of the Baltimore photographers on the evening of June 3d, and added ten new members to the list, making fourteen in all in Baltimore.

A great many enthusiastic circulars have been issued by these officers, a sample of which is appended below, which comes from ex-president J. F. Ryder:

PHOTOGRAPHERS' ASSOCIATION OF AMERICA —SECOND ANNUAL CONVENTION.

DEAR SIR: Having secured arrangements for half-rate fares from Cleveland to New York and return, for the Convention of the P. A. of A., to be held in New York, commencing August 16th, I take pleasure in announcing the fact, and desire as soon as possible that you advise me if you will join the Excursion.

The tickets will cost for the round trip $14.25, will be good for thirty days, and can be secured only through the undersigned.

Let us make up a party that shall do credit to Ohio. Let us have Cleveland and vicinity well represented.

Here is a chance many have been looking and wishing for for years; the chance to visit New York, to see the famous establishments of that great city, and the men who have made them famous by the excellence of their productions.

You can GROW MORE in one week in such surroundings than in a twelvemonth at home.

Give yourself a rest! a little recreation; more than all, give yourself a chance to learn much you did not know before. You may not have another opportunity to see *practical work*, and the *handling of sitters* by the *foremost men of our profession.*

Get out your linen duster and come on!

Yours truly, J. F. RYDER,
Of Executive Committee.

CLEVELAND, June, 1881.

LIFE INSURANCE.

We are assured that the subject of a Life Insurance League will certainly be brought to some practical shape, an expert in such matters having been engaged to assist and explain. A paper on this in our next.

PRACTICAL POSING.

It is certain that living models will be engaged, who will be posed and lighted by various skilled and celebrated operators, in a model skylight constructed for the purpose. This will be a sight well worth seeing.

THE USE OF ACCESSORIES.

This neglected department of our art will also be illustrated and explained.

EXCURSION RATES TO CONVENTION.

Members of the Association, and others, who will attend the Convention, and who can conveniently come to Chicago, can have tickets to New York and return for $20.00. The excursion will go over one of the best railway lines in the country, and, if the number is large enough, we shall be provided with a special train, with dining-car attached.

We suggest that photographers may do a favor to any of their patrons desiring to go to New York at that time, by securing tickets for them at this low rate, and making them part of our excursion.

Let us know at once, securing your tickets by sending remittance to either A. Hesler, Treasurer, No. 96 State Street, or Gayton A. Douglass, Secretary, Nos. 229 and 231 State Street, Chicago.

FRENCH CORRESPONDENCE.

Transformation of Negatives into Positives for Helio-engraving and Enlargement—Photograph of the Gold Fly by Mr. Bernoud, of Lyons—Experiments in the Use of Celluloid for Photography—Polychromy and Hydrotypy of Mr. C. Cros—New Discovery of Mr. Leon Warnerke—Improvement made by Mr. Woodbury in his last Process—Experiments made in Printing on Marine Glue, by Captain Biny—Topo-Engraving Process of Commander de la Noe—Graphotypy of Mr. Dubois—Succinate of Iron instead of Oxalate, by Mr. Borlinetto—Bitumen Negatives—Application of the Selenium Photometer to Printing in Artificial Light.

Mr. Roux, an operator employed at the War Office, has just published a practical treatise for the transformation of negatives for enlargements of helio-engraving.

This consists of the printing process in the camera giving in the development, first, a negative image, which image is changed into a positive by exposing the unfixed negative to diffused light, after which the negative image is destroyed by the solution of the reduced silver, and the positive print developed. The fact upon which this process is based is not new, but the practical working is but little known, and may prove useful, as it leads to the obtaining of positive prints very superior to those produced by contact.

Here are the formulas recommended by Mr. Roux, who has carefully experimented with them.

Collodion for Drawings and Engravings.

Ether at 65°,	650 c.c.	(22 ounces.)
Alcohol at 40°,	350 “	(11 oz. 7 drms)
Powdery Azotic Cotton,	10 grms.	(154 grains.)
Iodide of Potassium,	8 “	(123 “)
Iodide of Cadmium,	2 “	(31 “)
Iodine in Scales,	0.05 “	(¾ of a grain.)
Chloride of Zinc or Chloride of Cadmium,	2 “	(31 grains.)

Collodion for Portraits, Landscapes, and Paintings.

Ether at 65°,	650 c.c.	(22 ounces.)
Alcohol at 40°,	350 “	(11 oz. 7 drms)
Powdery Azotic Cotton,	10 grms.	(154 grains.)
Iodide of Cadmium,	6 “	(92 “)
Iodide of Ammonium,	2 “	(31 “)
Iodide of Zinc,	2 “	(31 “)
Bromide of Cadmium,	1.50 gr.	(23 “)
Bromide of Ammonium,	1.50 gr.	(23 “)
Chloride of Zinc,	2 grms.	(31 “)

Sensitizing Bath.

Distilled Water,	1000 grms.	(34 fluid ounces.)
Nit., of Silver crys.,	80 grms.	(2 ozs. 4 drs. 34 grs.)
Acetic Acid,	50 c.c.	(1 oz. 6 drs.)

Iron Developer.

Ordinary Water,	1000 grms.	(34 fl. ozs.)
Sulphate of Iron,	50 “	(1 oz. 6 drs.)
Acetic Acid,	50 c.c.	(1 “ 6 “)
Nitric Acid,	2 “	(32 minims.)
Ammonia,	2 “	(“ “)
Alcohol at 36°,	50 “	(1 oz. 6 drs.)

Strengthener No. 1.

Ordinary Water,	1000 grms.	(34 fl. ozs.)
Pyrogallic Acid,	5 “	(77 grains.)
Citric Acid,	25 “	(6 drs. 26 grs.)
Alcohol at 36°,	10 c.c.	(3 fl. drms.)

To this solution is added for use a few drops of the following aceto-nitrate solution:

Distilled Water,	1000 c.c.	(34 fl. ozs.)
Nitrate of Silver,	20 grms.	(5 drs. 8 grs.)
Acetic Acid,	50 c.c.	(1 oz. 6 drs.)

Transforming Bath.

Ordinary Water,	700 c.c.	(23 ozs. 6 drs.)
Bichromate of Potash,	30 grs.	(8 drachms).
Nitric Acid, pure,	300 c.c.	(10 ozs. 1 dr.)

Solvent for Preventing Accidental Fogs.

Sat. Sol. Bich. of Potash,	30 c.c.	(1 fl. oz.)
Alcohol at 40°,	30 “	(1 “ “)
Nitric Acid,	30 “	(1 “ “)
Ordinary Water,	400 “	(13 ozs. 4 drs.)

Positive Developer.

Water,	1000 c.c.	(34 fl. ozs.)
Pyrogallic Acid,	25 grms.	(6 drs. 26 grs.)
Citric Acid,	20 "	(5 " 8 ")
Alcohol at 36°	50 c.c.	(1 oz. 6 drs.)

to which are added a few drops of the aceto-nitrate of silver indicated in Strengthener No. 1.

Fixing Bath for Portraits and Landscapes.

Ordinary Water,	1000 c.c.	(34 fl. ozs.)
Hyposulphite of Soda,	300 grms.	(9 ozs. 5 drs.)

For Maps and Drawings.

Ordinary Water,	1000 grms.	(34 fl. ozs.)
Cyanide of Potassium,	20 "	(5 drs. 8 grs.)

Strengthener.

Ordinary Water,	1000 c.c.	(34 fl. oz.)
Saturated Alcoholic Solution of Bichloride of Mercury,	25 c.c.	(7 fl. drs.)

or a solution of aceto-nitrate to which has been added aceto-nitrate of silver.

Expose the cliché in diffused light, the collodionized side uppermost, and on a sheet of black paper or of black cloth. The exposure may vary from ten seconds to two or three minutes, according to the intensity of the light; in general, it is sufficient when the positive portions have become dark blue.

I send you two prints of the gold fly, which, thanks to gelatino-bromide, Mr. Bernoud has succeeded in reproducing whilst she is flying in the air, suspended, it is true, by a very fine steel wire, which is hardly perceptible in the print, so well is it hidden. Mr. Bernoud has been careful to not light this wire, so as to have little to do afterwards to hide it from sight. It is a very interesting photographic curiosity.

Mr. Fortier, and afterwards Mr. David, have endeavored to make out of celluloid thin plates and of uniform thickness, to be used as a photographic vehicle, light, pliable, and difficult to break. Up to the present time, it does not appear in what manner this investigation may be made useful, as we already possess the means, by combining gelatin and collodion, of making films as thin as desirable, and offering all the good points of a flexible, highly resisting, and perfectly translucid support. Why seek complications, when we can so cheaply and so simply realize this *desideratum* of the itinerant photographer?

Photographic polychromy is far from having said its last word. Mr. Cros has just taken out a patent for a process for immediate printing of polychrome work. He takes, as a sensitive film, a combination of three films, placed one over the other, one of which is red, another blue, and a third yellow. He then uses a polychrome cliché having the following colors: green, violet, and orange. The colored rays passing through this cliché destroy those of the colored pigments, which are the complementary color of the rays of the cliché; in this manner he obtains a polychrome image, not permanent naturally in white light, but which it might be possible to fix. Up to the present time there is nothing practical to be done with this, but it may lead to something good.

Another printing process is indicated by Mr. Cros, and called by him hydrotypy. This consists of plates of bichromatized gelatin, which are exposed to light and then allowed to disgorge in water, as in phototypy. After drying, they are placed in a colored solution with a communicative coloring substance. The gelatin swells everywere where the light has not reached it, absorbs the colored solution, and it is sufficient after this to press gently on the surface a sheet of white paper to obtain a tracing of the colored image. In this way it is possible to obtain monochrome prints, but in all colors, which placed over each other will give polychromies similar to the ordinary lithochromies. This process seems to us very useful, and it contains the germ of many a critical application.

For some time past the periodical press of England and of many other countries have been discussing the new discovery of our learned colleague, Mr. Leon Warnerke, whose inventions and prodigious activity are known by the whole photographic world. We have read with interest and without any reservation all that has been written on this subject. We will commence by summing up the question for those who are not familiar with it. According to Mr. Warnerke, bromized gelatin exposed and developed with ammoniacal pyrogallic acid behaves, in hot water, as does gelatin that has been bichromatized and exposed.

A gelatino-bromized paper negative, after development with pyrogallic acid, is transferred to a plate as is done in developing a carbon print, then placed in hot water, in which it fixes all the portions of the gelatin not attacked by light, having the property of dissolving in hot water in the same manner as in similar circumstances bichromatized gelatin would do.

From this fact, which does not yet appear to us to be absolutely certain, numerous consequences have been deduced. It would be possible, in a word, to obtain with much greater rapidity on gelatino-bromide of silver all that is now obtained with bichromatized gelatin—phototypic prints, reliefs for the Woodbury process, carbon prints, etc.

Nobody up to the present time has raised the least objection against all these assertions, and every one was prone, ourselves among the first, to extol the useful results of this discovery.

But to reason a question there is nothing like giving it an experimental investigation; the least trial will sometimes suffice to overthrow the most seductive theories.

We do not wish to say that the fact indicated by Mr. Warnerke does not exist, but, in our opinion, it is not up to the present time as rich in promise as has been made out. Let us explain: we know that pyrogallic acid, equally as well as tannin and gallic acid, produces upon gelatin a coagulating effect which renders insoluble in hot water portions of this substance which have been immersed in it. So that if we place in hot water a gelatino-bromized negative developed with pyrogallic acid, the entire surface of this negative will resist the hot water, and the detachments that are produced are nothing more than the consequence of the solution of the inferior portions of the geletin film not acted upon by the developer. The shorter the time given for the action of the developer, the less will be the thickness of the gelatin film penetrated by the pyrogallic acid. It results, from this observation, that if we cover paper with a rather thick coating of a geletino-bromized emulsion, exposed by contact or in the camera, and then develop it with pyrogallic acid, the film will be separated, so to speak; the upper portion will have been rendered entirely insoluble, whilst the lower half has not undergone the tanning or coagulating action of the pyrogallic acid. In these conditions of the gelatin mixture is transferred to glass and then treated with hot water. This last will dissolve the portion of the gelatin which has remained soluble, carrying off at the same time the emulsion of bromide of silver which is incorporated with it; but there will remain adhering to the glass not only the image alone, as is asserted by Mr. Warnerke, but the image buried in a continuous film of insoluble bromized gelatin. In order to free this insoluble film of the product sensitive to light which it encloses, it is still necessary to have recourse to hyposulphite of soda.

Our objection is a serious one, but it may be removed if Mr. Warnerke possesses a method, which he has not pointed out, for rendering insoluble in hot water gelatin simply coagulated by pyrogallic acid, whilst the portions acted upon by light and developed by pyrogallic acid will alone remain insoluble. In this lies the whole mystery, if there be one, but as no reservation whatever has been made, and, on the contrary, it has been said, *that development with ammoniacal pyrogallic acid is done in the ordinary manner*, we feel justified in reasoning from these precise and very clear indications. Well, we must say, that we can verify, but in a very incomplete manner, the fact pointed out by Mr. Warnerke.

As to replacing the bichromatized gelatin for reliefs, for carbon prints, and for phototypic printing, this would be rash, or at least very premature. We have attempted to impression a film of gelatino-bromide through the thickness of any vehicle, paper or glass, and then develop. In this case, the pyrogallic acid not being able to reveal the image except by penetrating through the gelatin film, the entire thickness of this film is rendered insoluble, and in hot water no result is obtained. It is necessary, in order to get rid of the bromide of silver which has not been reduced, to treat the print with a solvent of this compound. We must, therefore, say that we do not understand the process of Mr. Warnerke, whilst admitting at the same time that there is a difference in the solubility, or rather in the faculty of absorbing water, or swelling, between those portions which have been exposed and developed and those that have not undergone any luminous action.

We repeat, our objections would be reduced to nothing if our skilful colleague has discovered a process of paralyzing the action of pyrogallic acid upon gelatin which has been neither exposed nor developed. That is all we would like to know.

The new process of Mr. Woodbury, which is now about to be worked in France, and which I have already alluded to a few months ago, has just been greatly improved. We know that in this process the metallic mould from the gelatin relief is no longer obtained by means of the hydraulic press, but simply by pressing a sheet of tinfoil against the gelatin relief, passing it through a cylinder press such as is used for burnishing prints. Up to the present time a negative cliché was used which gave a positive relief. This required a transfer from the metallic mould and the coating of the back with copper in the electric bath. Mr. Woodbury, by using a positive cliché, obtains a negative relief upon which he presses directly a sheet of foil; the photoglyptic printing may then be done directly without having recourse to any other operation. This, as will be seen, simplifies greatly this ingenious and useful process, and will render it more popular here and everywhere.

For a long time back the sensitiveness to light of bitumen of Judea has been known and utilized, but that of other products, such as marine glue and coal-tar, has not received much attention. Capt. Biny has investigated, or better, is still investigating these products, and he has already remarked, on the one hand, that their sensitiveness is greater than that of bitumen, and on the other hand, which is very interesting, that they give complete images possessing infinite softness, which cannot be said of those made with bitumen of Judea. He has succeeded in printing images on albumenized paper and on *laid* paper, but what is still more interesting, one of these marine-glue images developed on a zinc plate was inked with a lithographic roller, and in printing gave all the half-tones. This is an important fact, as it seems to point to a new process of phototypic printing with marine glue. We have one of these plates that we ink at will, the image of which has suffered no injury whatever, notwithstanding the somewhat violent and various treatments to which it has been subjected. We advise all those who can to make experiments in this direction; we intend to do so because we see here an important application of photographic processes. The marine glue or coal-tar is dissolved in benzine and spread over the surface of the zinc, in the same manner as is done with bitumen; after an exposure five times shorter than if bitumen was used, develop in a mixture of turpentine and essence of petroleum, or in alcohol. The image may then be coated with gum-water, and used as in phototypic printing.

In the same establishment in which are made the experiments we have just described is used, under the direction of Commander de la Noë (director of the photographic ateliers of the Topographic Brigade of the Engineer Corps), a very interesting application of a process conceived and called by him *Topograveur*, on account of its perfect adaptability to the printing of topographic plates.

A sheet of bitumenized zinc is placed under a positive, either an original design or engraving, and exposed to the light for a suitable length of time. It is then placed in a solvent of the bitumen, and the drawing shows itself where the metal has been uncovered, whilst the bitumen, which has been rendered insoluble by light, covers the other portion. The plate is now treated with a weak acid solution so as to produce a slight biting, the lines resembling those of an etching and of a copper-plate engraving, but not so deeply sunken. The plate is now well dried, and covered a second time with a very thin coating of bitumen of Judea. When the varnish is thoroughly dry, a piece of willow charcoal is passed over the whole surface in order to remove the insoluble varnish. The metal is thus exposed, except in the depressions where the carbon could not reach, and which remain covered with the bitumen. Ink with a lithographic roller which gives prints of very great delicacy. It is a copper-plate, inked and printed like a lithograph, and these last words describe appropriately the interesting process of Commander de la Noë.

A short time ago the *Photographic Journal* of Vienna (Austria) published a process of Mr. Luckhardt, designated as follows: Transformation of a photograph into a line print. At the same time Mr. Dubois, a painter and photographer at Tours (France), made known to us the result of a process called by him Graphotypy, and which consists in an operation similar to that indicated by Mr. Luckhardt. A positive is made on dry collodion by contact. This positive is covered with a varnish sufficiently transparent to allow the image to be seen, but highly refractory to the passage of the actinic rays. This varnish is made of gum-lac, to which is added aniline yellow to render it impervious to the chemical rays, and a little castor-oil to prevent its scaling under the print. The print thus varnished is placed in a retouching frame and the positive traced with the point, which gives not only the exact outline, but also all the modelling. It is evident that only an expert in drawing can succeed in making, in this way, good work. But for a skilful designer, what great facility is offered by this preliminary arrangement of the subject that he has to reproduce. When the work performed by the point is finished, we have a negative that is easily transformed into an engraved plate, or which may be printed from by the phototypic, photolithographic, bitumen on zinc, etc., process. You see that methods for printing line clichés are not wanting.

Mr. Borlinetto, of Padua, writes us that it is possible to substitute with advantage the succinate of peroxide of iron for the oxalate in the development of gelatino-bromized negatives, as it is more energetic.

We have spoken so much about bitumen of Judea that we will be pardoned for giving still another process for making countertypes of perfect opacity for the reproduction of line images. The original drawing, accurately traced, is placed on a plate coated with bitumen of Judea mixed with a small quantity of marine glue. This last body prevents scaling of the bitumen, if any retouching is to be done to the negative. The bitumenized plate is treated, after sufficient exposure, with essence of turpentine, then washed in water. The drawing then appears in very brilliant lines upon a ground of bitumen, which is absolutely impervious to the chemical rays when the coating has been made of suitable consistence. The process is therefore simple and economical, giving, besides, excellent results.

A final word. When using the process for rapid printing upon highly sensitive films in artificial light, it is sometimes difficult to measure exactly the luminous intensity of the source of light made use of. We have found the means of giving it at all times an equally effective intensity by using our selenium photometer, and this is how we do it:

Let us admit that our basis for the printing of a given negative is twelve seconds of time for fifteen degrees of the photometer. That is to say, the galvanometer marking fifteen degrees, whilst the selenium receiver is placed at the exact spot in which is the print, or in the same plane. It will suffice, the receiver being placed, at the commencement of a series of new operations, in the same plane, to increase or lessen the distance from the source of light to the precise point at which the needle of the galvanometer will point to fifteen degrees. In this manner it is possible to ascertain with certainty the illuminating power of the lamp used, and all the succeeding operations may be made with great regularity. Moreover, it is possible during the operation to consult the photometer at any moment.

For this it suffices to place the receiver upon one of the sides at a distance precisely equal to that of the lamp from the sensitized surface, then, the eye fixed upon the needle, it will be seen if the lighting power has varied, and the proper change made if necessary. It is also possible to make use of this instrument, which possesses an extraordinary degree of sensitiveness, to measure the luminosity of a natural light, and to render it equal in effect to one produced artificially.

It suffices for this to place the pressure frame at a given point in the glass-room, at which the needle will indicate fifteen degrees, for example, as was shown in the camera in the light of the sole source of artificial illumination. We are endeavoring to simplify the arrangement of this appliance in order to bring it within the reach of all. LEON VIDAL.

PARIS, June 1st, 1881.

GERMAN CORRESPONDENCE.

Gelatin a Phosphorescent Body—Warnerke's New Process—Nitrate of Silver as a Sensitizer on Dry Plates—Influence of Gelatin on the Sensitiveness of the Plates—The Carbonate of Sodium Developer—A New Preliminary Coating for Collodion-Gelatin Emulsion Plates—Hypo in the Ferro-Oxalate Developer.

ABOUT a year ago Laoureux made the remarkable discovery that a quite hurriedly lighted bromide of silver gelatin plate transferred the effect of the light upon another non-exposed plate when placed upon the latter, in the dark, so as to leave an interstice of one-half m. m., the result being that both plates give in developing pictures of almost equal intensity. It was remarked later on that, as far back as 1860, Testelin made the same observation with negative iodine of silver paper. Pizzighelli did not succeed in observing such a transfer of the invisible light picture, whereupon Laoureux repeated this experiment, and frankly declared that he, too, did not succeed any more in observing the phenomena. It is just this frankness which imparts importance to Laoureux's first statement, and it is highly probable that his observation was no delusion. Why did the phenomena occur the first time, and not on the second occasion?

Dr. Eder now explains the matter with the phosphorescence of the gelatin. He shows that already in the last century Beccari knew that gelatin and paper which had been exposed to the light were phosphorescent. The cause of the transfer of the light picture, observed by Laoureux in his first experiments, may have been nothing else than the formation of a phosphorescence picture upon the gelatin besides the photographic picture upon bromide of silver. The former is easily reproduced photographically, as is well known. Similar circumstances may have obtained in Testelin's observations and similar cases. As the phosphorescence in different kinds of glue and paper is undoubtedly influenced just as much by minor circumstances as it is in the sulphide of calcium, etc., it is easy to explain the different results of the experiments and the different statements. Whether it is possible to produce a strong phosphorescing gelatin, and whether the matter will have any practical importance, has to be seen yet. It would be nice, indeed, if a second negative could be made at once from one lighted plate; the same would, of course, be the reverse of the first in regard to right and left, but just such reversed negatives are of value for collotypes and the carbon process.

Recently Warnerke published a quite new method to obtain such reversed negatives, promising to give soon some very interesting modifications of this new process. Warnerke found that a picture upon bromide of silver gelatin (no matter whether taken in the printing-frame or in the camera), which had been developed with pyrogallic, has the properties of a lighted pigment layer, *i. e.*, insoluble in hot weather. One can therefore transfer and develop in hot water a picture developed with pyrogallus upon bromide of silver gelatin just like a carbon picture. The pyrogallic acid seems therefore to act like tanning upon the lighted spots. With ferrous oxalate the experiment does not succeed. Warnerke transferred a gelatin picture developed thus upon glass exactly as pigment pictures are transferred, and obtained in this way a reversed negative upon glass, as all the gelatin which had not been acted upon was removed with the combined bromide of silver by the hot water. What all will not be made yet with the bromide of silver gelatin? Without gainsay, a new era in photography has begun with the introduction of the same, and many experiments are made to increase yet the sensitiveness of the bromide of silver gelatin. I believe, however, that this endeavor is carried too far.

I have seen that many photographers obtained fog with the present very strong light of the summer, because they exposed the highly sensitive plates too long. One second is often too long. It is different in winter, when the sensitiveness of the plate cannot be increased too much. Recently I also tried to find out whether nitrate of silver, which is such a good sensitizer for wet plates, increases the sensitiveness. On former occasions I have shown already that nitrate of silver is with gelatin plates not alone of no advantage, but on the contrary is a disadvantage by forming red fog. I explain this circumstance from the fact that the gelatin binds a part of the nitrate of silver, which it retains even when washed a very long while. This nitrate of silver is reduced when brought in contact with the alkaline developer and fog is formed. Of course, through this the possible sensitizing effect of the silver nitrate is entirely hid, and it remains therefore undecided whether such an effect is in fact existing.

My collodion-gelatin emulsion, which acts in many respects more like a collodion than a gelatin preparation, and does not show the disagreeable red fog in developing with free nitrate of silver, enabled me to solve the question about the sensitizing effect of the nitrate of silver upon highly sensitive bromide of silver. To such an emulsion of moderate sensitiveness, which had been prepared with an excess of bromide of ammonium, but was afterwards thoroughly washed, so that not a trace of free bromide could be detected, an alcoholic nitrate of silver solution 1:100 was added, drop by drop. It was found that the emulsion in question could bear an addition of three drops solution of silver to five c.c. without danger of forming fog (in developing), and that thereby a very marked increase of the sensitiveness was produced, the sensitiveness being now in fact at least one and a half times greater. The addition of another drop of solution of silver did not increase the sensitiveness, but, on the contrary, formation of fog was occasioned by it. The increased sensitiveness superinduced through the addition of silver fell off very rapidly, and after the lapse of twenty-four hours the original degree of sensitiveness was established again. The reason for this is, that the nitrate of silver present is gradually disintegrated through the gelatin present, whereby the sensitizing body is destroyed. I believe that the sensitiveness of the gelatin plates is increased less through the addition of extraneous bodies than through careful selection of the gelatin itself. Bad gelatin, especially such which contains reducing substances, makes always a very indifferent sensitive emulsion, which cannot be improved by any means. Of course, it is difficult to furnish always a uniformly good gelatin, the manufacturers depending, just as with albumen, upon the raw material, and, in so far, complaints about poor gelatin will be heard as long as complaints about poor albumen paper.

In respect to the carbonate of sodium developer referred to by me in my last letter, I have acquired some new experiences, which, although they bear in the first line upon my collodion-gelatin emulsion, have nevertheless some interest for the gelatin-plate workers. It appears that the quantity of bromide of potash quoted before is yet too large, and for plates which do not incline to form fog, the third or fourth part of that quantity will suffice. It is well to state here that the soda developer is more apt to occasion fog than the common pyro developer. The less bromide of potassium the carbonate of sodium developer contains the quicker and softer it works, and it is therefore easy to obtain either very intense, but somewhat hard, plates (*i. e.*, for reproductions), or soft negatives as for portraits, by modifying the percentage of the bromide of potassium. The developer gives great latitude in this respect, and obviates in many instances intensifying altogether. For the portraiture branch I recommend the soda developer to be mixed so that in the first place a quantity of solution of soda containing bromide of potassium is kept ready on hand, by dissolving 210 grains soda and 1½ to 2 grains bromide of potassium in 360 c.c. water. To a *carte-de-visite* are taken:

Soda Solution, . . .	25 to 27 c.c.
Water, ...	73 "
Pyrogallic Acid in Alcohol (1 : 10),.	5 "

The plates, after thorough developing, are not washed to avoid blisters, but are coated with common salt alum solution, or, better, placed in the same (30 common salt, 9 alum, 100 water). This solution must be kept at hand in liberal supply. After the said solution has acted a minute, the plate is washed and fixed as usual. For this developer a good sub-coating, which clings as tightly as possible to the layer, and thoroughly drying of the latter, are very important.

The following sub-coating I can recommend. It keeps better than caoutchouc, is more easily mixed, and dries quicker than the watery gelatin solution used until now.

A. 4 grains gelatin are put in a small bottle, 20 c. c. spirit of verdigris poured in, and the whole placed in hot water, and often shaken until all has become dissolved. The solution will keep four weeks. *B.* 1 grain of chrome-alum is dissolved in 20 c. c. cold water. The solution keeps any length of time.

For coating the plates, mix 2½ c. c. of the solution *A* with 70 c. c. alcohol of 70° (27 c. c. water, 73 c. c. alcohol), and add to it 1 c. c. of the solution *B.* The mixture is well filtered and poured upon the dried, cleaned, and dusted plate. It flows easily, like collodion; the part which runs off is not gathered. The plates dry rapidly—in about one hour; if necessary, the drying process can be helped by warming, and the drying be forced in a quarter of an hour. The solution soon becomes thicker, and, although it will keep some days, it is better to use it only when fresh.

Speaking of developers, I may as well point out the advantages of the addition of fixing soda, recommended by Abney, Eder, and Wilde. With the ferrous-oxalate developer, it is a convenient expedient to increase the rapidity of the developing and the softness of the picture. But while with the oxalate developer the addition of fixing soda in the quoted quantity offers extraordinary advantages, with the common pyrogallic developer this addition gives not the slightest advantageous effect — rather the contrary, in fact, for an inclination to form fog is noticed. The reason of this different behavior may be found in the fact that in mixing with oxalate of iron a small quantity of hyposulphite of iron is formed, which certainly has more developing energy than the oxalate of iron in itself.

It is a well-known fact that Eder's developer acts less favorably upon Vogel's emulsion plates than Nelson's developer. The plates developed with the first, appear somewhat hard and less fully exposed, and, furthermore, the effect is very tardy. For this reason I tried the addition of fixing soda as proposed by Abney and Wilde, and the success was so surprising that with this addition Eder's developer can be used with said emulsion to good advantage. The addition of fixing soda effects a much more rapid appearance of the picture, and the more fixing soda is present the more rapid the appearance, the consequence being softness and greater harmony. I recommended for said plates the following receipt:

Neutral Solution of Oxalate of Potassa (1 : 3), . . .	45 c c.
Solution of Bromide of Potassium (1 : 10), . . .	1 "
Solution of Fixing Soda (1 : 200),	1 "
Solution of Sulphate of Iron (1: 3)	15 "

For very hard-working plates, double the quantity of hypo stated here can be used.

Very truly yours,

Dr. H. W. Vogel.

A DRY RUN.

Determined to see just how much there was in this excitement about "cheap outfits," and total inability to fill orders for bromo-gelatin plates, we made a quick run over to New York one day last month, and brought up at the establishment of Scovill Manufacturing Company, and the works of the American Optical Company. Our first "meet" was with our old acquaintance Mr. John J. Atkinson, the well-known proprietor of the "American Photographic Warehouse" at Liverpool, England, who, following the example of his father, prints the "Stars and Stripes" upon his envelopes. He crossed the sea for novelties, and evidently knew where to come.

In the line of apparatus we found it was actually true that a 4 x 5 view camera-box, one patent double dry-plate holder, one tripod camera-stand, and one Waterbury achromatic lens, could all be had for $10.00. Whereas $12.00 would purchase the same articles for 5 x 8 size; add to this, $6.50 more, $18.50 in all, and a pair of stereoscopic lenses is added, thus giving one everything for making 5 x 8 and 4 x 5 single landscape views, and those of stereoscopic size. What *more* could one ask?

Only a better quality for those more advanced or more particular, and these are supplied of the sizes named for $27.00 and $41.50, respectively, adding $25.00 in each case for a lens of Morrison's excellent make.

The whole grand array was shown us, and we selected an "outfit" for a clerical friend in Massachusetts, who, in less than a week, sent proofs from negatives of which he said, "these were made entirely by myself, and if Mr. Carbutt's Keystone plates always work as finely as these, my photography will be mere child's play." And this truthful gentleman never before exposed or developed a plate.

At the rear of their principal floor, Scovill Manufacturing Company have had a "red" or developing room erected for the accommodation of their patrons. Indeed, they had *everything* except a garden on their roof, *a la* Palestine, in which plates could be exposed. Doubtless, Mr. W. Irving Adams, the enterprising agent of the Company, will have this too, so soon as he sees his way clear to make it an advantage.

We found knots of people here and there discussing the merits of the two developers—the ferrous oxalate and the pyrogallic. The latter was said to be the more accommodating, often, as it were, bringing up disappointed hopes, even after hope had been lost; while the former usually jumped at a result, and seldom changed its mind. But there is no disputing at all the fact that the ferrous-oxalate developer is the simpler and easier, and, in the long run, the more certain. The manipulations are simply these: 1. Rinse the plate with cold water. 2. Apply the developer. 3. Wash under the tap. 4. Immerse in alum solution. 5. Wash again. 6. Fix in hypo. 7. Wash, and dry, and varnish.

A developer recently published by Scovill Manufacturing Company is as follows: Provide two bottles, and in them mix the following solutions:

1.—	Bromide of Ammonium,	29 grains.
	Neutral Oxalate of Potash,	5 ounces.
	Water,	20 "

2.—	Tartaric Acid,	19 grains.
	Protosulphate of Iron,	5 ounces.
	Water,	20 "

A large supply of these may be made, as it keeps good for a long time. Shortly before developing a negative, mix together the above in the following proportions: solution 1, four ounces; solution 2, one ounce. Pour into a flat dish and immerse the exposed plate, the image upon which will rapidly appear, and continue to acquire density.

More details are given in Wilson's *Photographics*, page 276.

It is also recommended by some to add, say 288 grains of alum to the fixing solution. We object to this, and like Dr. Vogel's suggestion the best, of using a trifle of salt instead.

Although now almost a veteran in bromo-gelatin emulsion work, the first favorable day after we returned home, we took our traps and double-holders out at 5.30 A. M., and in less than two hours had made twelve exposures of nine different subjects.

This included nearly two miles of travel, getting a man and wife out of bed that we might climb to their roof, three trips to the top of an eighteen feet pile of boards, ere the whole of us could be landed and returned to *terra firma*, and a wade through a muddy potato patch. We were at our office desk at the usual time.

Could it have been done before Mr. Carbutt furnished the "Keystone" for such a structure of exploits? and every one of the dozen plates gave us what we expected—good results. So we can afford to stop right here, only adding *try it.*

* * *

In speaking of the new gelatinized paper made by Mr. P. Morgan, of London, Dr. Phipson believes that the idea was suggested to Mr. Morgan by reading the phototype process of Mr. Leon Vidal, described at page 255, etc., of his excellent practical treatise published in 1879. (Practical Treatise of Phototype, or Printing with Fatty Ink upon a Gelatin Film. Paris, Gautier-Villars, 1879.) This is not, moreover, the only idea that has been gleaned from this useful volume.

Editor's Table.

Pictures Received.—From Mr. Latour, Sedalia, Mo., stereoscopic views of the exterior of his new building, and of the reception-room and skylight. The last are shown with the accessories, backgrounds, etc., very tastefully arranged, and we do not see what more a photographer could wish to enable him to produce the best work. Mr. John A. Mather, Titusville, Pa., favors us with a fine vignette head of a gentleman. From Mr. R. Witte, Morrisania, N. Y., a batch of very creditable card and cabinet pictures of young and old. Mr. E. B. Core, Lincoln, Ills., besides sending us some fine examples of his promenade size, adds a set of rather a pretentious nature, of portraits of some of the children of the Institute for Feeble-minded Children, representing "Spring," "Summer," "Autumn," and "Winter." They are very well done, the "Autumn" being specially well managed. Mr. Core has just leased new and larger rooms. A parcel of fine things comes from the indomitable Mr. J. Pitcher Spooner, Stockton, Cal., who puts *himself* in his work always, and does his very best. The best photographs we get of silverware are from Mr. M. L. Daggett, photographer to Messrs. Reed & Barton, silversmiths, Taunton, Mass. Nothing photographic can be more exquisitely lovely in effect than a parcel of such just received. Mr. S. H. Parsons, St. Johns, N. F., whose work we have frequently mentioned, is one of the *growing* photographers of our country. He makes continual progress. We have seen him advance steadily for years, and the reason is, evidently, that he buys and reads every photographic book issued, and then puts into practice the knowledge he thus gains. A large batch of his recent work is now before us, of panel and promenade sizes. They show a great deal of merit and artistic feeling, and are also technically excellent. We like to see such growth, and congratulate our distant subscriber on his success. Mr. J. B. Liesenring, Fort Dodge, Iowa, though a young man, has been a quarter of a century upholding the dignity of our art, and constantly progresses. Some examples of his work before us are very superior in finish, and show skill and feeling in their management all through. Notwithstanding fierce competition, Mr. Liesenring maintains good prices, and can do so, because he gives an equivalent. Six of the most comical expressions we have seen lately were given by his little boy to Mr. W. Latour, Sedalia, Mo. The little fellow is represented angling from a rustic bridge, and, as though called, looks up with a grin that reveals two rows of pearly teeth. The pose is also capital. The "Tadema" picture, thanks to Mr. Alva Pearsall, Brooklyn, N. Y., shall soon be shown to our readers. Mr. M. H. Albee, Marlborough, Mass., favors us with a number of examples of his work. A group of four little children is particularly attractive and well managed.

Items of News.—Mr. A. M. Brown, manager of the "Peerless Albumen Paper Works," Rochester, N. Y., writes us that they are working up a fine trade. We have tried several brands of their paper, and found it excellent and easy to work. Please read the new advertisement. Messrs. Peck & Snyder, New York, continue to advertise their "Singing-Bird" Baby Quietus, as they find a big sale for it. Douglass, Thompson & Co. have issued a special circular setting forth the charms of this great skylight acquisition. Get one. The "Peerless Adjustable Wire Easel" is now sold at $3.00 per gross by the Scovill Manufacturing Co. Mr. John R. Clemons has shown us a print of a locomotive (negative by Mr. John Reid, Paterson, N. J.), on his paper, 13 x 28½ inches long. Very fine. Have you seen one of Mr. L. W. Seavey's new artistic illustrated letter-heads? Try and get one. Mr. J. D. VanStavoren the solar printer, at Atlanta, Ga., issues a very useful catalogue and descriptive price-list, which he sends free to his patrons. The *Sunday Gazette* praises his work very highly. Mr. Charles S. Gies, head operator in B. L. Rider's gallery, Chicago, was found dead in his room on Sunday, June 5th. He committed suicide by taking cyanide, it is believed. Poor boy!

The *Monthly Index*, a trade journal devoted to the interests of booksellers, says, in its "Notes of Periodicals," "The *Philadelphia Photographer* is not only the prettiest but the best periodical devoted to photography which comes to us. The pictures are masterpieces of photography, and the text is of practical value to students of the art."

It is a striking commentary upon our action in behalf of the fraternity in the matter of "Artotype" licenses, that Mr. W. J. Baker, of Buffalo, N. Y., one of the first to purchase, and who defended the thing in our columns, has been battling for some months in the law courts to get some of his money back, upon the plea of misrepresentation. Moreover, several others, who are "in the same boat" as to depleted purses, are his sympathizers and his willing witnesses and helpers. After all, we are assured by Mr. BAKER that our judgment was right.

MR. J. C. SOMERVILLE, the indomitable St. Louis stock-dealer, believing that "birds of feather (*should*) flock together," has removed to new and more commodious quarters, at No. 1009 Olive Street, in the next block west of that in which the studios of Messrs. SCHOLTEN, FITZGIBBON, and FOX are located. The new building is 23 x 110, and Mr. SOMERVILLE occupies three well-lighted floors and a cellar. A hydraulic elevator rides all his patrons free, and he gives five per cent. discount on all bills of ten dollars and over. Mr. SOMERVILLE has grown ever since he began business, and it won't be long before he will have to enlarge again.

MESSRS. WILSON, HOOD & Co. send us some photographs, that are very beautiful, of OSBORNE'S patent Picturesque Foregrounds. These "foregrounds" are negatives to be used in photography by combination printing, and the photographs are from some of the designs which have been printed by Mr. OSBORNE'S method. 'A print is first made of the window negative, and then the opening of the window is cut out. Now it is only necessary to make the negative of the subject to fit in the cut-out, and print in the usual manner of medallion or double printing. They are certainly a new power in the hands of the photographer.

MESSRS. E. & H. T. ANTHONY & Co. also offer two prizes of $50.00 each, and one of $25.00, for portraits and views on the Eastman Dry Plates. Full particulars sent by them to applicants.

THE editor of the *Bulletin* still mourns over his fifty dollars. Why does he whine so? It will cost him more for the *next* Convention. It was funny he couldn't tell where his fifty dollars was until we told him; "but some folks can't see anything till you tell 'em."

THE outline study on the cover of our April issue was credited to Messrs. TRAPP & MUNCH. These gentlemen inform us that the original photograph was from a negative by Mr. OTTO REITMAYER, Munich, Bavaria.

"OUR PICTURE" this month is printed on the well-known paper imported for our own use by Mr. G. GENNERT, New York. Mr. GENNERT asks attention to his new advertisement this month, desiring that all who appreciate and want good albumen paper should read what he says. Also, remember his liberal prize offer. His paper is very certain, free from blisters, and easy to work.

MR. J. A. W. PITTMAN, Springfield, Ills., receives nearly a column of description of his fine rooms, in a city paper. Among other things, it says: "Mr. PITTMAN ranks ahead of all of his competitors in this branch of art in Springfield, and the greatest triumphs can be seen by visiting his gallery. He occupies a fine, large, spacious building, 20 x 154 feet, all on the ground-floor, and fitted up in the most modern style, and we are free to say that we have not visited a finer gallery in the State than this. The perfect picture is the result of fine workmanship, well lighted gallery, artistic retouching, and graduated effects, and all of these are to be found in the studio of J. A. W. PITTMAN."

A CORRECTION.—"As I am travelling for Mr. W. D. GATCHEL, I do not get to see the *Philadelphia Photographer* regularly, and I missed your inquiry in regard to myself. My formulæ for retouching fluid should have read: 'Benzine, 6 ounces; Damar Varnish, ½ ounce.' If too thick to make the negative sticky, add more benzine. Hoping this will help our brother artist,

"Your, etc., NEAL P. HARRINGTON."

THE study on our cover this month has been chosen, as seasonable, from Lesson T, "Photography Outside," WILSON'S *Photographics*.

THE *Picture and Art Furniture Trade*.—This journal, published monthly at Chicago, is full of matter of interest to the photographic fraternity, and especially to that large class of the profession who, in addition to the pursuit of their craft, find it expedient to carry a line of engravings, pictures, frames, etc. *The Picture and Art Furniture Trade* represents in its advertising columns the best houses in the United States dealing in these goods, and is vigilant in keeping its readers posted from month to month on novelties and news. It is a valuable paper, to which every photographer should subscribe.

WE are requested to print the following:

"THE ALFRED JONES' (?) PROCESS.—In the June *Philadelphia Photographer* I find mention of one of my photographic processes which has been claimed and patented by Mr. ALFRED JONES, of Yonkers, N. Y., greatly to my surprise. I have no doubt that Mr. JONES may have reinvented my process, but since I exhibited specimens some months before his application for a patent was filed, and learn that the three claims which he then made were entirely abandoned two months later, and new and different claims made, I believe I have the right to be considered the original inventor of the process until he furnishes conclusive proof to the contrary. I showed specimens of both engraved plates and pen drawings to a good many persons, including yourself and Messrs. HOWSON & SON, patent solicitors. I expressed my intention to obtain a patent as soon as circumstances would permit, but was obliged to delay the application in order to get my other process into commercial shape.

"Respectfully yours,

"FRED. E. IVES."

THE *Winona Daily Republican* devotes an article to the late photographic trip of Mr. W. E. SNELL, who went out, in the interest of Messrs. ELMER & TENNEY, to make views of the great snow drifts in the vicinity of Sleepy Eye, lately reproduced in *Harper's Weekly*. Dry-plates were used exclusively for this work, and the results were highly satisfactory. We have a number of the prints before us, and don't see how they can be better. Messrs. ELMER & TENNEY write us of their delight with gelatin plates.

IN an article entitled, "A Chance to Raise Prices," on page 196, we have alluded to Mr. J. E. BEEBE, one of the most energetic photographers in Chicago, as a pioneer in dry-plate work, and held up the hints given in his timely circular worthy of following by those who desire better prices. We want to say more here as to the technical merits of Mr. BEEBE'S work on bromo-gelatin plates, examples of which were alluded to. They are fully equal to his results by the old bath process, both in artistic and technical value. Mr. BEEBE was one of the first to see the desirability of the new process, and to utilize it in the West. He has experimented largely with it since, in all its ramifications, most carefully too, and has earned the success to which he has attained. He was quick to see the chance, too, to take advantage of the points given in his circular, and is worthy of the highest praise as well as the patronage he is receiving.

WILSON'S PHOTOGRAPHICS was inscribed by its author to W. IRVING ADAMS, ESQ., the well-known agent of SCOVILL MANUFACTURING COMPANY in the following words: "To my excellent friend, WASHINGTON IRVING ADAMS, in acknowledgment of the modest and unostentatious way in which he has devoted himself, for over twenty-five years, to the growth of American photography, by securing and providing the wherewithal to produce the best results in the best and easiest way, this book is inscribed in the name of, and for, the whole craft, by the author." Upon this Mr. J. H. FITZGIBBON, the veteran editor of the St. Louis *Practical Photographer*, says: "The compliment of dedicating WILSON'S *Photographics* to WASHINGTON IRVING ADAMS is good and deserving. If we ever retire from the *Practical*-ability, and turn our attention to literature, and should publish a work on the light of other days, we certainly shall dedicate it to one of ADAMS' sons." And, undoubtedly, he would.

AN exceedingly interesting article, by Mr. J. TRAILL TAYLOR, on "Illustrated Journalism—The Marvellous Success attained by the *Graphic* System of Photography," recently appeared in the *British Journal*, and in the issue of June 17th was reprinted in the New York *Daily Graphic*. We wish we had space for it here. All who are interested in knowing what a splendid helper photography has become in the line of magazine and newspaper illustration, should procure and read this valuable essay.

MR. T. H. MCCOLLIN, 631 Arch Street, Philadelphia, has favored us with the June issue of his *Price Current of Photographic Goods*. It must be helpful to buyers.

MRS. R. MAYNARD, Victoria, B. C., sends us some of the very best stereographs we have yet seen made on Carbutt's bromo-gelatin plates, of scenery in that far-off region. We do not see how anything more lovely than these could be reasonably expected by any process. They are fine.

WE see by the *Indianapolis News* that Mr. LACY, of that city, was the fortunate photographer who made the portraits of Miss Louise Montague, whereby she obtained the $10,000 "beauty prize" offered by Mr. Adam Forepaugh, the great circus manager. We have not seen the pictures, but presume they were very fine.

MESSRS. A. M. COLLINS, SON & CO. inform us that they have made some additions to their line of No. 35 cards, and send us a full line of samples of this number. The attention of the trade is invited to these truly beautiful goods, which all dealers sell. There are seventeen colors and tints made.

OUR August issue may be delayed a few days in order to give our readers the latest details of the arrangements for the Annual Convention of the Photographers' Association of America, to be held in New York, beginning August 16th. Every live photographer should attend, and therefore we want our readers to have knowledge of the latest inducements.

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THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. AUGUST, 1881. No. 212.

A LAST WORD FOR NEW YORK.

This is the last time we will be able to reach our readers before the opening of the Second Annual Convention and Exhibition of the Photographers' Association of America, to be held in New York city, beginning August 16th, 1881, and we desire once more to urge upon all who can, to "come." The purposes of the anticipated meeting are well known to you, and the plans of those having the matter in charge were made plain to you in our last issue. Read them over, and then go share the glory and the spoils. Be not afraid, "for courage mounteth with occasion."

It has often puzzled us to know, on similar occasions, what some photographers were present for; but of one thing we are now very sure, and that is, that the gentlemen who this year are the most prominent in conducting the arrangements for the coming Convention and Exhibition, have but one single idea, which pervades and controls their actions throughout. It is, to secure the education and consequent progress and prosperity of the whole photographic fraternity, impartially and certainly. They all love photography for its own sake, and desire its growth. They all know that the only way to make it grow, or to even hold its own, is to instruct and improve those who hold its fate in their hands. It is so in and with every profession or trade in the world, and photography is no exception. The various committees, therefore, working out this policy, have prepared a dish of salad to offer you in New York, which will be for your greatest good, if you will come and partake of it, and help hand it around. The plain salad will be presented. They look to you to provide the "dressing," and to assist in making it palatable and beneficial. Some of you can help better by your presence than in any other way. Indeed, a large attendance is what the committees desire more than anything else. Others, of course, will be called upon to read and speak, and operate and demonstrate. Let *all* come with a desire to *do something* towards giving our art a tremendous push forward, and good will surely result for one and all.

Let the *Convention* have your first attention, and the "sights of New York" come in last.

We anticipate much pleasure from meeting old and new friends, and much profit from what they say. In the matter of addresses and papers to be read, permit us to use some words of another, which we read at Chicago, and then we are done. They may help some one or more to be useful, and we modestly submit them:

Boil it Down.

Whatever you have to say, my friend,
  Whether witty or grave or gay,
Condense it as much as you possibly can,
  And say it in the readiest way.

And whether you write of political affairs,
Or particular things of your town,
Just take a word of friendly advice,
Boil it down.

For if you go spluttering over a page,
When a couple of words would do;
Your butter is spread so much, you see,
That the bread looks plainly through.
So when you have a story to tell,
And would like a little renown,
To make quite sure of your wish, my friend,
Boil it down.

When writing a letter for the press,
Whether prose or verse, just try
To utter your thoughts in the fewest words,
And let them be crisp and dry;
And when it is finished, and you suppose
It is done exactly brown,
Just look it over again, and then
Boil it down.

For editors do not like to print
A letter really long,
And the busy reader does not care
For a couple of yards of song.
So gather your wits in the smallest space,
If you'd win the author's crown,
And every time you write, my friend,
Boil it down.

CO-OPERATIVE LIFE INSURANCE.

The tendency of the age is strongly in the direction of mutual aid by organized associations, and in no department of society is this tendency more manifest than in that of Life Insurance. There is a growing distrust of the gigantic corporations, which, under the name of mutual companies, have been managed in the interest of the cliques that control them, rather than of the policy-holders who contribute to their maintenance. The enormous reserves that have accumulated in these institutions, and the princely fortunes bestowed on their officers, raise the inquiry whether the rates of insurance have not been unreasonably high. This question appears to have found a satisfactory solution in the experience of the co-operative companies which are now rapidly multiplying throughout the land. The actual working of these companies shows that a perfectly safe system of Life Insurance can be conducted for one-third the rates demanded by the regular insurance tables. The gain is due mainly to two causes.

The *reserve fund* of the old system is dispensed with in the new, and the profits accruing from lapses are, in the latter case, made immediately available to the insured.

That the reserve demanded by the old system is unnecessary, and not connected with the risk, is made clear by the testimony recently given by Shepard Homans before the New York Assembly Committee, and by the published opinion of Elizur Wright, of Boston, both of them celebrated authorities in Life Insurance. It is simply a savings-bank, collateral and incidental to the insurance.

The managers of these old companies invite the policy-holders to make them the custodians of savings which might as well be invested in a regular savings-bank, or else retained in the keeping of the policy-holders themselves.

The objections to converting insurance companies into savings-banks are:

1st. There are more risks incidental to, and more failures in, their business than in ordinary savings-banks, and,

2d. The failure to keep up the annual fees for insurance works a forfeiture of the deposits already made.

The co-operative system of insurance does not recognize any reserve, nor does it profit from the failures of the insured to keep up their annual payments. In this respect the system is analogous to that of fire insurance companies, where only the current risk from year to year is provided for.

The two great sources of accumulation in the Life Insurance Companies are thus eliminated, and the insured reserve to themselves at least two-thirds of the amount they would pay if insured under the *regular* life insurance system. These savings they can invest at their discretion, and as satisfactorily as if deposited with the managers of Life Insurance Companies.

It is the boast of the old system that it provides for "the last man." The stampede that is now moving towards the co-operative associations looks as if the regular companies might soon have the opportunity of putting their favorite theory to a practical test. W. I. A.

[As the subject of a Mutual Co-operative Insurance bond is likely to come up for consideration at our next Convention, these remarks are submitted for the public good.—Ed. *P. P.*]

PLATT'S EYE-REST.

BY S. L. PLATT.

The annexed cuts represent Platt's Lightning Adjustable Rotary Eye-Rest. You can see, by the big name I give it, that it scoops everything in the way of eye-rests. 1 is a rotary arm; 2, a copper clasp fastened stationary to 3, an adjustable slide, which has a screw-eye at each end. A heavy card is passed from one to the other once double, and fastened at the bottom, so the string can be moved if desired, and give it easy play up and down the adjustable arm. It will stop at any point, and remain stationary. 4 is a rotary card support fastened to the adjustable slide by a screw at the centre; the hole must be large enough to allow it to turn with ease; cut out a little on the inside next to the card, at the bottom, and place in a small piece of lead, so that the picture will always be right side up. 5 is a movable card; 6, back of picture, and 7, screw-eyes.

FIG. 1.

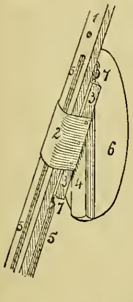
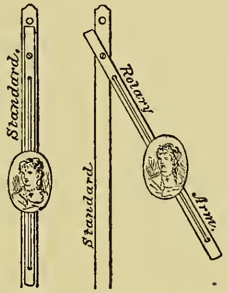


FIG. 2.



You will see by Fig. 2 that the rotary arm will allow the picture to be right side up anywhere within the radius of the arm.

Wilson's *Photographics* is becoming known, and the testimonials as to its usefulness which come to us are very abundant and gratifying. The *eighth hundred* is already demanded.

THE ELECTRIC LIGHT FOR PORTRAITURE.

[We who live in a land where old Sol smiles so continuously have no need of the electric or other artificial lights for photographic purposes. Some years ago it was tried to make magnesium available, but it was a failure. The photographer rebelled against "over hours," and the patron soon understood that nothing could give such perfect results as the pure and unadulterated light of the sun, and refused to be comforted artificially. But in other countries they are not so favored, and must resort to whatever means they can to obtain light. The electric light is employed considerably, and, thinking it would interest our readers to see how it is done, we add a couple of articles from our contemporaries.—Ed.]

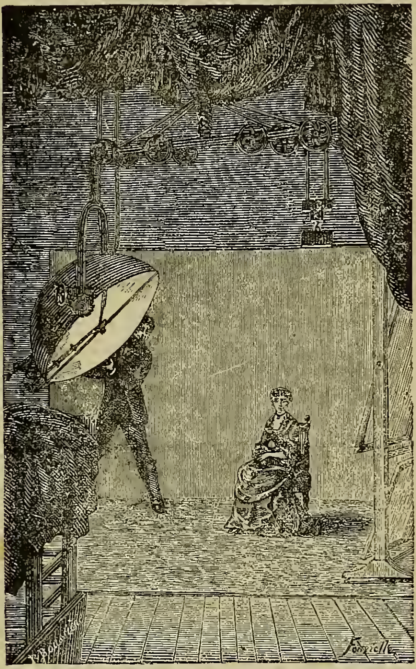
In the large capitals, such as London, Paris, and St. Petersburg, it is desirable that professional photographers who are in vogue should be able to make pictures at night, either before or after balls, etc.

In England the "luxograph" is used, a kind of reflector with a pyrotechnic light. To-day, that electric light is easily produced, it very naturally finds its application in lighting artificially the photographic glass-room. This is what Mr. Liébert, of Paris, has well understood, and we give the description of his appliances, taken from the journal *Electricity*.

"The voltaic arc is hidden by a kind of saucer made of opaque porcelain, upon which impinge the luminous rays, and which reflects them on a half-sphere of about one and one-half to two metres in diameter, the concave side of which faces the sitter. The light, by this double reflection, is broken and diffused, and possesses surprising homogeneousness. The interior of the sphere is lined with a mat-stucco paper, of a bluish tint, chosen with the greatest care, in order to preserve the photogenic property of the rays of light, and so increase their action on the iodide of silver.

"The apparatus is suspended from the ceiling by a system of pulleys, levers, and counter-balance weights of very great simplicity and of elegant design, by means of which the light may be directed on the sitter in such a manner as to bring into play the lights and shadows.

"The two carbon points from which the spark is evolved are placed almost at a right angle; one is fixed, and the other is put in motion by means of a screw, which the hand controls with remarkable ease and precision. This is intended to allow the operator to utilize the maximum energy produced by a powerful gramme machine, put in motion by a gas-engine of five-horse power. The focus, which has a lighting power which may be normally placed at from 300 to 400 carcel burners, may be made to produce twice this quantity by increasing the rapidity of the machine's rotation. The time of posing is reduced to a few seconds; and this powerful calorific radiation does not produce on the most delicate skins, or the most sensitive eyes, any of the bad effects which have hitherto rendered electric light inapplicable to photographic operations."—Dr. Monckhoven's *Traite General de Photographie.*



MR. LIEBERT'S PHOTOGRAPHIC APPARATUS FOR ELECTRIC LIGHT.

Portraiture and Printing by the Electric Light.

On the evening of the 23d ult., the Dundee and East of Scotland Photographic Association assembled at Lochee, on the invitation of their President, Mr. J. C. Cox, of Beechwood, for the purpose of carrying out a series of experiments on the electric light as an illuminator for portraiture and printing. About thirty of the members responded to the invitation of Mr. Cox, and a busy and profitable evening was spent. The apparatus provided was everything that could be desired, and was placed at the disposal of the gentlemen assembled in a large, high-roofed hall. When the current was laid on, a flood of light of the most dazzling description filled every corner.

At one end of the hall had been erected the dark-closet, completely "rigged out" with developing-trays, glasses, bottles, etc., while on a bench near at hand were to be found the necessary baths and enamelled trays for the development of platinotypes. Two Gramme dynamo machines, which absorbed together six horse-power, supplied the current to two Serrin regulators, which gave out a total light of 3,000 candles. These regulators were mounted on independent and adjustable stands, so constructed that those who choose might place printing-frames round the lights without interfering with the portraiture experiments. There was an ample supply of large reflecting surfaces constructed with canvas and drawing-paper on frames. These were adjustable to any angle on the horizontal or vertical planes.

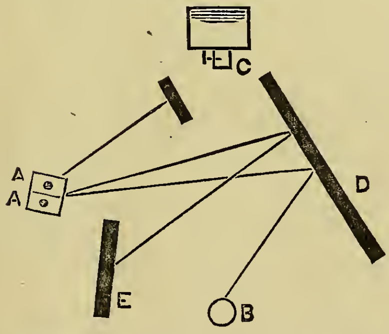
Thirty enthusiastic photographers from Dundee, Arbroath, and district, each armed with camera and plates, and ready for work, gave quite a lively and eager character to the proceedings. The active and courteous secretary, Mr. C. Johnson, photographer, Nethergate, Dundee, put the meeting on a footing of order by distributing forms on which the results obtained by the various classes of lenses and plates might be tabulated.

When all was in working order work was begun, and one gentleman after another took the whole apparatus under control, shifting the screens into position and adjusting lights and sitter "as seemed right in his own eyes." It must not be inferred, however, that with this arrangement no definite experiments were carried out. On the contrary, every one seemed to exert his ingenuity to devise some rearrangement of the apparatus for the purpose of securing good results.

The light given out by the lamps was good, and during the whole of the evening the hall was ablaze and never once in darkness, owing to the careful and scientific handling of the lamps by Mr. Elder, manager to Messrs. Cox Brothers. Occasionally, owing to some impurities in the carbons, the arc flickered, and at moments a light of what seemed of more than ordinary actinicity bathed all in a most intense purple violet; but, taken as a whole, the lamps gave out a steady, pure, white light, which could be relied on in timing. The first experiments were abortive through the want of data on which to rely for exposure; but ultimately the correct exposure was arrived at, and a series of very good printing negatives was obtained.

To give an account of the experiments *seriatim*, and of the resulting flat and unprofitable pictures, would be of little use to the readers of the *Journal*. It will suffice to give an idea of how the best results were obtained.

In the following diagram one of the best arrangements is shown, the dotted line showing the paths of the light:



A A Electric lamps. B Sitter. C Camera. D Reflecting screen of white paper. E Screen to reflect or filter to transmit light. F Screen to prevent direct rays from entering camera.

It will be observed that the lamps were placed together, so that, practically, from one point there was an intense beam of light.

This light was interrupted by screen E, and did not fall directly on the sitter. The beam of light passed the edge of the screen in front and was reflected from screen D, which was so placed as to make the angle of the incident beam equal to the angle of reflection, from the point of the sitter. A quantity of light was reflected from screen E, which was also placed at the proper position with regard to the incident ray from screen D. The distance between the lamps and the screen D was five feet, and from the sitter to screen D, along the path of the light, two feet nine inches. With this arrangement, very good, round results were obtained. A number of experiments were carried out with screen E, replaced by thin white linen, which allowed a proportion of the light to filter through. This method, when used alone, was useless, owing to strong shadow. When screen D was replaced, so as to illuminate the shadows, a decided amount of flatness and disagreeable skin texture was the result.

About a dozen printing-frames were exposed to the lamps during the evening, consisting of ordinary and platinotype prints. At the close, the platinotypes were successfully developed by Mr. Cox from some especially-beautiful winter landscape negatives taken by himself. The exposure of the platinotypes on fairly dense negatives varied from fifteen to twenty minutes. This exposure, however, might have been much reduced by placing the frames near the lights, the distance tried being as nearly as possible two feet from the light.

At the close of the evening's proceedings a most hearty vote of thanks was accorded to the President, Mr. Cox, for the kind way in which he had entertained the members, and the latter evidently felt, on leaving, that through the generosity of Mr. Cox there had fallen to their lot an opportunity of testing the merit of the electric light such as has fallen to the lot of very few photographic associations.—*British Journal of Photography.*

GATHERINGS HERE AND THERE.

At a meeting of the South London Society, Mr. Warnerke made some remarks on what is known by the name of *green fog* in the gelatin emulsion, a defect which he easily corrects by the use of a weak solution of bichromate of potash. This addition, however, reduces the sensitiveness about one-half.

At the same meeting Mr. Dunmore announced that he had found in ammonia an agent that prevents the decomposition of the albumen; and Mr. Ayers corroborates this opinion from his own knowledge. He found that the following proportions answer well the purpose:

Eggs, ...	3
Water, . .	2400 c.c. (81 fld. oz. 4 drs.)
Liquor Ammonia, ...	18 dps.

The editor of the *Moniteur* remarks, in this connection, that nitrous ether is also an excellent antiseptic.—*From Dr. Phipson's Correspondence in the Paris Moniteur.*

The yellow color of prints may be easily prevented, writes a correspondent of the *D. P. Zeitung.* It suffices to burnish the prints with the aid of heat to preserve them from this accident, which is not always prevented by thorough washing, by care in the selection of the boards, by enamelling with varnish or collodion, and even by keeping the prints protected from the action of light and air.

An anonymous correspondent of one of our chemical journals asserts that he has made several experiments recently with salicylic acid in order to test its value as a photographic agent. He says that he has obtained great advantages from its use. It improves the action of the pyrogallic acid developer on gelatino-bromide plates, reducing the time of exposure of about one-tenth. The formula given for this liquid is as follows:

Pyrogallic Acid, .	2 gm. (31 grs.)
Salicylic Acid, . .	0.3 " (4½ ")
Glycerin, . . .	7 " (1 dr. 48 grs.)
Distilled Water, .	300 c.c. (10 fld. oz. 1 dr.)

The pyrogallic acid is dissolved in a portion of the water, and the salicylic acid and the glycerin in the remainder of this liquid, and the two solutions are then mixed.

The same author has found it advantageous to use a small quantity of the salicylate of soda in the solution of chlorides used for salting the positive paper. He uses 0.1 gramme of salicylate (1½ grains) for each 300 c.c. (10 fluid ounces 1 drachm) of water. The paper is sensitized in a nitrate of silver bath as usual; the printing is done, it is said, in one-quarter of the time than with the paper generally used, and the tone obtained is a very pleasing violet-brown.

Self-Luminous Photographs.—Self-luminous photographs are, at the present moment, attracting much public attention in Vienna. When these are examined by daylight they look like ordinary paper photographs, but in the dark they are beautifully phosphorescent in the high-lights, have a more or less feeble glow in the half-tones, and in the deep shadows possess no luminosity.

The preparation of these self-luminous photographs is very simple. A silver print on albumen paper, or a collotype, is rendered transparent by brushing over it a mixture of equal volumes of castor oil and oil of turpentine. The superfluous oil is removed by means of cotton wool or a linen rag, and the phosphorescent paint is then put on. The paper thus prepared is then dried, and afterwards mounted with its reverse side on card-board. So soon as it has been exposed to the daylight, and the light penetrates through the transparent or semi-transparent parts, the phosphorescence of the luminous paint underneath is excited, and in the dark the image is seen with all its gradations; brilliant pictures and moonlight landscapes give especially good results.

These self-luminous photographs were first introduced to the Vienna public at a ball given by the chemical students of the Technical High School on the 3d of March last. The ladies' ball programmes were decorated with a self-luminous picture, representing an alchemist at work in his laboratory.—Dr. J. M. Eder.

Autocopiste Noir, and its Application to Photography.—To those of my indulgent readers who are ignorant of what the *autocopiste noir* means, let me explain that it is a sort of chromograph which gives impression in black lithographic ink, by means of a layer of gelatin on the surface of a piece of parchment paper. This parchment paper is coated with gelatin, and moistened for a couple of minutes. When it is dry, it is stretched upon a frame, very ingeniously constructed to give rapid and great tension. The manuscript is made on ordinary well-sized paper, with an ink of which the base is perchloride of iron. It is then transferred to the gelatin—as in the chromograph—by rubbing it gently with the hand. After this a roller charged with lithographic ink is passed over the surface of the gelatin, when the letters will be seen to take up the ink. A piece of white paper is then placed on it, pressed with the hand, and the impression is taken. The roller is again passed over the surface, another impression is taken as before, and so on, taking care to damp it from time to time with a sponge, if the ink should have attached itself anywhere than on the letters. I have myself tried this system of autograph, and have found that, by coating the parchment paper with a very thin film of gelatin, it was quite possible to take photographic impressions in fatty ink of line drawings; it is only necessary to sensitize the parchment paper with bichromate of potash. Instead of parchment paper, a glass plate coated with a thin film of gelatin hardened by alum can be used. The transfer is made as described above, and a black autograph is obtained without having recourse to a press.—Leon Vidal.

Reproductions of Plans and Drawings by the Heliographic Process in Black Lines on a White Ground.—A sheet of white paper is floated for three minutes on the following bath:

Sulphate of Peroxide of Iron,	20 grms.	(5 drms.)
Perchloride of Iron, . .	20 centig.	(3 grs.)
Gelatin, ...	20 grms.	(5 drms.)
Tartaric Acid, ...	20 "	(5 drms.)
Water, ...	330 "	(10 oz. 5 dr.)

After removal, the paper is dried in *obscurity*. To reproduce a plan for example, it is placed on the prepared side of the sheet, which rests on a board covered with a cloth. A sheet of very clean glass is placed over the whole, and kept in contact by means of four or five clamps. Now expose in the sun, or in daylight, twenty-five minutes in the first case, and a day in the second. After exposure return to obscurity (or to artificial light), and remove the sensitized sheet. No image is seen; to make it appear, plunge the sheet into the following solution:

Gallic Acid, . .	2 grammes	(31 grains).
Alcohol, ...	5 "	(77 ").
Water, ...	200 "	(6 ozs. 3 drs.)

Now wash in pure water and dry.

Printing upon Wood for Wood Engravers.—Make a not too strong diapositive with thick collodion with the wet method. After fixing, tone with hypermanganate of potassa, and after thorough washing dissolve the picture in a cup of water and some spirit of verdigris; frame the plate and remove it from the cup with a piece of tissue-paper, after most of the water has been slowly poured off. Now put the picture upon the block, which has previously been prepared with zinc-white or white-lead in glue or gelatin solution. When the picture has dried on fast, remove the collodion skin through washing with a mixture of equal parts of ether and alcohol. The picture adheres then in powder form to the surface of the wood, while the block does not come in contact with the solution.—Aug. Zeloekens, *in Photogr. Archiv.*

A French *savant* has succeeded in killing the phylloxera by means of electricity. He passes a powerful current through a copper wire wound about the infected vine, when both eggs and insects are killed by the shock.

A CLEARING SOLUTION FOR GELATIN NEGATIVES.

I may say to my readers, do not be afraid to immerse your negative in the solution made according to this formula (*diluted slightly*), even if your negative be ever so thin. I have some negatives taken last week, under very unfavorable circumstances, by the shortest exposure possible with a drop shutter, and they are *very* thin; but I get good brilliant prints from them, even in the sun. I simply mention this to prove that there is no fear of *this* solution *eating* away any of the detail; for, by trying these very thin negatives by printing from them before and after treatment with the clearing solution, it has proved to me that it is one of the necessaries to the production of good printing gelatin dry plates.

Make a solution of

Citric Acid, . . .	2 ounces.
Water, ...	10 "

and one of

Alum, ...	2 ounces.
Water, ...	20 "

These can be kept in separate bottles, and when wanted mix five ounces of the former and ten ounces of the latter. Immerse the plates in this for a few minutes, or keep a solution of

Citric Acid, . . .	2 ounces.
Alum, ...	1 ounce.
Water, ...	10 ounces.

This will be found most useful for reducing any specially-dense part by painting on the solution with a brush when the negative is partially dry.—John Cowell, *in Br. Jour.*

LUCKHARDT'S PHOTO-ENGRAVING PROCESS.

This process, which has been rightly called a "Columbus' egg," like so many others, owes its origin to chance. Being requested, at a few hours' notice, to draw a portrait for a circle of friends, I intended to use as a guide a photograph, the printing of which was, however, delayed. The idea then occurred to me to coat the negative, which was at hand, with yellow varnish, and to etch the portrait with the needle on that ground. As I wished to make a caricature, the salient characteristics of the negative were retained as a foundation, the transparent parts etched out, and the clothing altered. In this way the photo-engraving was produced, the further use of which, I believe, is not to be undervalued. In view of the circumstance that the drawings and wood-cuts of portraits which appear in the illustrated papers have frequently lost the likenesses of persons whom they represent, and that notwithstanding they are costly and require a long time to produce, would it not be advisable to use engraved photographs instead, even when the original negative, taken from nature, is not to be had, but only a negative reproduced from it?

The yellow varnish—consisting of common negative varnish to which a suitable quantity of aniline yellow has been added until it has assumed a dark sherry color—may be graved very well for a few days; but the older the varnish film the more brittle it becomes, and, therefore, a few drops of castor-oil are added to it to render it elastic. The action of light upon sensitive paper placed beneath the negative is effectually suspended by the yellow varnish, so that only the transparent lines, produced by the graver, print. When once the principal lines of the original picture have been faithfully laid down, even an untaught draughtsman may produce an engraving of the portrait that shall at least have some resemblance; while a draughtsman skilled in cross-hatching or a xylographer should furnish a work which, placed beside a good wood-cut, should exhibit a superiority recognizable even by the unprofessional eye. Besides the rapidity with which the engraving can be made, the possibility of the utmost correctness is offered, since lines which have been too deeply graved or wrong lines may be filled up again with yellow varnish and engraved anew, a printing-frame and silvered paper offering a convenient method of watching and controlling the progress of the work. Where broken lines are desired, a pencil may be passed over them, and then they may be pricked, and so on. By transfer-paper an impression from an engraved, yellow-varnished negative plate may be transfered to zinc, and in this way a plate suitable for printing with the letter-press printing-press will be produced.

The portrait of Dr. Emil Hornig, the President of the Photographic Society of Vienna, issued with the current number of the *Photographische Correspondenz*, was engraved in about an hour, the faultless zinc *cliche* being produced in a surprisingly short time, in the chemigraphic establishment of Herren Angerer and Göschel, so that in a single day a negative, the engraving and the *cliche*, ready for printing from, may all be produced with ease.

As I never before made a drawing for a woodcut nor engraved a portrait, I must add that I by no means consider the portrait of my honored friend as a work of art; but my first attempt having attracted some attention in the Vienna Photographic Society, I was induced to prepare the present portrait for its organ. I hope the process may soon meet with extensive application at the hands of capable artists.—FRITZ LUCKHARDT, *in Photographische Correspondenz.*

PHILADELPHIA PHOTOGRAPHER AND NON-SUBSCRIBERS.

IT is necessary for every photographer to keep himself posted in his every-day workings. He may find to his benefit an easy way to success. The *Philadelphia Photographer* will meet his requirements. Those who are not readers of this bright journal cannot gain a higher foothold. They are grasping from day to day, and are trying to find out what is the best chance they can get at, but they make no progress. I have been a subscriber for this journal for the last three years, and before that time I got it occasionally, as I took a notion; but on looking over its pages it cheered me up and brought me to a mind to get it regularly by being a continuous subscriber. The important feature it brings is the charming frontispiece, a study of real art taken by the best artists, who are trying to help the weaker class. Just look at the July issue. It is grand. It is from that venerable gentleman, Mr. J. F. Ryder, of Cleveland, Ohio, who does his best to help along every one. Such work is a real gem of art. It gives us good instruction, such as we shall not fail to secure within its folds the light it obtained from the masters who every day are laboring to ascend higher. True it is our magazine has made many a one a fortune. The hints and dodges it contains will surely lead one on a straight road, for it is impossible for him to get on a cross one and get lost, and then commence to think and say, I am on the wrong road, I will have to turn back and do this over until I get it right. I say, yes, *right.* I do not say, "Well, I haven't got any time to read books now." I hear one say, as I am busy, and if I read half an hour my time is lost. No, your time is *not* "lost." What you read is putting more knowledge in your dark mind. It will give you light, and some day you might happen to fall in line with the same article you were reading about, which probably might have been about your bath, collodion, printing, or silvering paper. Note the change that will happen, and how easy everything will work by keeping up to time with the *Philadelphia Photographer.* Nine times out of ten you will never regret the small subscription price of $5.00. How often would one give that sum alone when he gets in trouble with his chemicals and light. If you are not a subscriber, draw your attention as though you are in earnest. Under any circumstances do not lose any time, but subscribe at once.

Now, Mr. Editor, as I am taking up more space in your journal than I am admitted to, I wish you a thousand more subscribers.

Yours truly,
A SUBSCRIBER.

PICTURES MUST HAVE SOME VALUE.

BY CHARLES LATHAM.

THE great cause of depression in business at the present time is owing principally to the starvation prices that have been established by low class galleries; also by some of the fair photographers who have dishonored the business by cutting the prices down to spite their neighbors. And these extremely low rates affected the whole photographic fraternity, more or less, and caused great annoyance and hard times throughout the craft. And before we see better days, and business flourishing as it should, we must do away with this low-price system, and establish prices we can live by, and do better work.

The question would naturally arise, "How can this be accomplished?" My project is this: Form a Photographic Union; adopt a schedule of prices, and pledge ourselves not to make pictures below the adopted list. We will say, for instance, card-size photos., two dollars per dozen, and cabinets, four dollars per dozen, and other pictures and sizes in proportion. Of course, we can charge more, as we value our work above what the stipulated prices shall be fixed, but nothing less. By this union of prices we would know where to find the bottom, and what per cent. our work is worth above the standard list. And then, to make the obligation binding, and to prevent any photographer making work below the schedule, from malice or other cause, we would also pledge ourselves not to buy stock of any one that would sell directly or indirectly to any person or persons that made work below the adopted list.

To some it might seem as though this system would not be a success, but if nine-tenths of the fraternity would approve of it, we would have our own way. I do not believe in monopoly, or to usurp the right of others, but I do think we should protect ourselves against the effects of this terrible slaughter of prices. And the benefit we would realize would also be appreciated by the stock-dealers, inasmuch as we would have money to meet our bills. Let us have established and better prices, and do better work. What say you of the craft?

SOME CASES OF CYANIDE POISONING.

A few weeks ago a gentleman about forty years of age came limping into our office, with shaking head, and trembling limbs, and very little control over any part of his body. His face was drawn, his speech was impaired, his right arm was helpless, and he was a wreck generally. The only thing about him that was good was his spirits and, as we found, a tender, kindly heart. He was a photographer,—a German by birth, but of late years working in South America, China, and Japan. He was reduced to the condition described by the constant use of cyanide, and having tried every means within his reach was then on his way to Germany in search of surgical skill talented enough to recover what he had lost.

Another example of the dreadful consequences arising from the use of this horrid poison, which should never enter a photographic studio, is given in a letter below from a gentleman whose name and writings are very familiar to our readers. This brings the matter very close to home, and we are sure he will not object to the printing of his letter as a warning to his fellow workers.

My dear Sir:

. . . I have had the narrowest escape of being obliged to answer yours from "spirit land" (if that is possible). I believe cyanide did the mischief, my system being in a favorable state for its action—absolutely tired out, and suffering dreadfully from insomnia. It is but seldom I use it; and having been overhauling the baths, my fingers being pretty dirty in consequence; a lot of prints wetted down for mounting requiring clean hands, and being in a hurry and alone, I used it to clean my hands. I felt it pain me at the time in a cut on my hand, apart from the nausea the fumes always occasion me; but I was hurried, and annoyed at being called away very many times, and so did not take the precaution necessary to counteract it. But shortly afterwards, while making a sitting, I was seized with dizziness, terrible pains in the stomach and muscles, with vomiting and diarrhœa, which kept up for about six hours. Not even water would remain. *Every* muscle seemed to be contracted; you could feel them like knotted ropes in my legs and arms and sides. I certainly thought I was going to die, and I believe the doctor had little hope for me, too. I am glad I didn't, because I can't afford it. But I am so weak it even pains me to walk; but then I must work.

Very truly yours,

Abm. M. DeSilva.

"A word to the wise," etc., etc.

New Haven, April 26th, 1881.

OUR PICTURE.

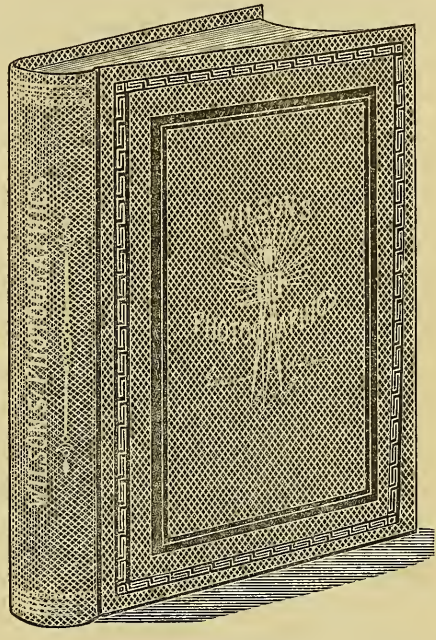
The beautiful pictures which embellish our present issue are printed from negatives supplied us for the purpose by Messrs. Gilbert & Bacon, whose well-known galleries are located at No. 40 North Eighth Street, and No. 820 Arch Street, Philadelphia, and whose photographs of celebrities are well known all over the world. They are gems in their way, and show what perfection can be reached in what is now accepted as "plain photography." These gentlemen stand in the very front rank of American photographers, and, of course, such work brings to them a liberal and continuous patronage. They are both of the "second generation" of photographers. We have known them from their photographic youth up, and have watched their steady and certain progress with a great deal of interest. They, neither of them, "took daguerrotypes," but they did, both of them, once upon a time, "took ferrotypes." They are not "veterans," therefore, who are content to work in a "rut," but they are men of growing propensities, of ambitious tendencies, and artistic culture.

One of their important helpers is Mr. William Osborne, the inventor and patentee of a method of after-treatment of the negative, which he has termed "Artograph." These pictures, so far as their accessories are concerned, are examples of Mr. Osborne's skill and ability as an artist. All such portions are worked in upon the negative by his peculiar method, and by his hands. The "artistic ability" is a necessity in such work as this. Were all such fine artists as Mr. Osborne, they could equal his work. A great power is given to those who are able to manage it by his method, but it is as destructive as a locomotive off the track in unskilled hands, driven by an uncultivated mind. Exquisite results are procured by Mr. Osborne, who invents the general design first, and poses his models to accord.

The prints are made on the new "non-changing pink" albumen paper of Messrs. Trapp & Münch, Friedberg, Germany, supplied us by their New York agent, Mr. Willy Wallach. For a long time these gentlemen experimented to secure a pink paper that would neither change color when exposed to the light nor in the solutions. They have at last succeeded in this, and the prints before you are upon it. Some examples we have seen, with a strip of the paper left outside of the print, show that the paper has not been in the least changed by the action of the sun or the chemicals. This is a great triumph in albumenizing, and will be quickly appreciated by our photographers, who never relished the fact that their results would change color, be they ever so cautiously made. We do not think the prints before us leave anything to be desired, either in color, tone, or finish.

WILSON'S PHOTOGRAPHICS.

What the Press says of the New Work.



We now redeem the promise made last month of giving Wilson's *Photographics* a more extended notice than we had then an opportunity of doing.

The matter is arranged as a series of lessons, the text portion, by the author himself, being copiously backed by selections from the writings of other authors who at various times have written on the subject under special treatment. While we should have much liked to have had more of the individual opinion of the author than is sometimes to be found, *he* seems to have considered that "in the multitude of counsellors there is wisdom," by which consideration he has been led to give the more practical portion of the subjects treated in the language of those who in various journals, almanacs, or manuals have made special study of the same. This labor of selecting from the works of a suitable author is far from being the easy task that one would think, for it requires laborious research into the literature of our art, together with the exercise of a sound judgment to determine what is most useful and what is less so. If, therefore, for no other reason at all than this bringing together within the boards of one book, methodically arranged, the opinions and teachings of such a host of writers, Mr. Wilson is deserving of our best thanks.

In Lesson A—"The Treatment of the Subject"—we have a valuable compendium of Art rules and principles, and are pleased to find that the author has retained this in his own hand to a much greater extent than any of the other topics. Under the heading of "Circular Composition," Mr. Wilson writes:

"Having now endeavored to explain and illustrate the angular and pyramidal forms of composition, it is desired to draw your attention to the circular form. It will be found the style of composition to some extent applicable to photography—particularly in grouping. Before attending to the examples given below, note, for your guidance, a few things which it is necessary to attend to when grouping.

"The story must be well told—that is, one figure must be so linked to the other that the spectator has little or no difficulty in discerning the purpose or designs of the photographer; see that the parts assigned to each figure be appropriate and natural; that the general outline be graceful and pleasant to look on; that the grouping affords an opportunity for a judicious arrangement of light and shade; and not only should the lines of the group so run that the eye is led to the principal figure or figures composing it, but the principal focus of light should also be so managed as to assist in doing this. Use all the appliances at your disposal to reach the highest point of excellence; and, to those who have not yet tried a camera with a swing-back, be it said, if you can afford it, by all means get one, and see that the arrangement is such as to swing both horizontally and perpendicularly.

"To succeed in photographing groups, the photographer must not only possess quickness of perception, but promptness in decision, and that in a very marked degree, for, while these qualities are required in the posing and arranging of single figures, the difficulties to be overcome are tenfold when you have to compose and arrange a group, even of three or four figures, for it must be remembered that not many minutes often intervene between the conception and the completion of the work. To succeed, then, all the powers of the mind and the eye must be put forth, and that with an energy that many do not understand. The painter in composing has more leisure to arrange, complete, and perfect his ideas; nor is he so tied down as to depth of focus, etc.

"But do not entertain the idea that all the advantages are on his side. The rapidity of production which the camera affords, if properly used, is a very powerful means of educating—the work, good or bad, is at once before us to study; and by studying we can see many of our faults, and discern points of excellence, which the careful photographer stores for future use; and many of the mechanical difficulties, when earnestly grappled with, give way to our will. It is hoped that not a few of those who have given this subject their careful study will find help to a quick perception of what is good or bad, and be enabled to promptly decide on what to accept or reject.

"Some hastily reject all rules, and consider them only a hindrance to their progress in art, because men have arisen, from time to time, whose works were formed by no rule, yet became a model and a rule to other men. Still, as Professor Sedgewick has remarked, 'few, however, among us are permitted to show this high excellence; ordinary minds must be content to learn by rules, and every good system must have reference to the many and not the few.' We have undoubted authority in the example of the great Raphael for being humble and apt to learn."

This part of the work alone is worth far more than the whole price charged for the book, and the best advice we can give to a photographer is to study very attentively the principles laid down and apply them in his daily practice. By so doing he will soon find that he has risen far above mediocrity.

The other branches of this subject are treated in a like clear manner, and we only regret that we cannot make room for more extracts of a similar nature. In the various artistic illustrations (by Gutekunst and others) by which this important lesson is embellished, it is significant and of great value that silver printing has been altogether discarded, the fatty inks of the mechanical printer having superseded it.

Lessons B and C (the needful Apparatus and the Lens) we pass over at present, together with D (the Dark-Room) and E (the Preparation of the Glass), arriving at F (the Chemicals and Solutions).

In this chapter we find a variety of formulas for making collodion, one of which, by James O. Merrill, strikes us as being somewhat at variance with the experience of Mr. Duchochois, Mr. Coonley, and the others who took part in a recent discussion on the insolubility of bromide of potassium in collodion (reported in our May number).

There are so many good formulas given, that the chief difficulty will be in deciding upon which to use.

Our own opinion respecting the change that takes place when the potassium salts are added to collodion or the nitrate bath does not quite coincide with Mr. Wilson's. We believe that the precipitate that takes place when adding bromide of potassium to the ether is not the metallic base of the salt, but bromide of potassium in the same state in which it was added, owing to its extreme insolubility in ether and alcohol. In the second case, that of iodizing the silver bath, what we believe to be the reaction that takes place is this: that the potassium (as nitrate of potash) mixes with the solution, some iodide of silver being dissolved and the surplus precipitated.

The strength of the cyanide of potassium fixing solution recommended for negatives (one ounce to six of water) is greater than we have ever seen it tried. It says much for the excellence of the cyanide sold by the Scovill Manufacturing Company that we can give *ten* grains per ounce as the *maximum* strength that we have ever found it necessary to employ when using their cyanide. This is a matter that depends largely upon the strength of the cyanide. We have heard of samples adulterated to such an extent with carbonate of potash as might almost lead to the supposition of no great harm accruing if one accidentally swallowed some. But *good* cyanide is an active poison as well as an active solvent of bromide and iodide of silver, and a weak solution should invariably be employed. But, as Mr. Wilson says, it is much better to avoid it altogether whenever such can be done.

Under the heading "Manipulatory Miseries" Mr. Wilson devotes attention to the nitrate silver bath. We give an extract:

"The nitrate bath probably comes in for more censure than any of the solutions used in photography. It is often innocent, and more often abused and misused. While it is the photographer's best friend, it is hated by him as though a 'poor relation,' and for years the inventive genius of the craft have been racking their brains for some means of abolishing it. The bromo-gelatin process promises much, but we cannot give up the nitrate bath for a time yet. Therefore a few more thoughts concerning it and its treatment properly belong here. If difficulties occur with it, nine cases out of ten they result from the neglect of yourself. It may be you abuse it—it may be you have overworked it. To discover the trouble, the first step is to test its strength by any of the well known methods. Pile's silver test is the best.

"Oftentimes a simple means of rectifying the bath is sufficient to put it in perfect working order. If it is too acid, cyanide of potassium may be used, or nitrate of barytes is often found helpful. The permanganate of potash is also resorted to with good results. The choice of these should depend upon circumstances and conditions, though their action is much alike.

"In handling a bath solution much waste may occur if the operator is not careful in pouring the solution to and from the bath-holder. A siphon may be used for the larger solutions with greater assurance against accident and loss. With care no loss need necessarily occur by either method.

"One of the gentlest means of curing a disordered bath is by giving *it* a sun-bath. Many disbelieve in such treatment, but it is largely practised and is very good. It is slower than some other means used, but it is none the less sure, and is certainly not liable to accident.

"Another method is to 'boil down' the bath. The water and other fluids it contains are thus evaporated, when the silver crystals are again dissolved in water as when the bath solution was originally made. A still further method is to fuse the silver, the advantages of such a method being considered greater than those gained by simple evaporation to dryness.

"And yet the means of rectifying the bath—of saving it from being utterly cast out and aside—are not yet exhausted. While ingenuity has been greatly exercised to find a substitute for it, as much thought has been given to discover means of saving it and making it do its duty. There are those whose time is so valuable that they can better afford to make up a new bath than spend time in doctoring an old one; all cannot. The notes which follow will be found very helpful to all who are in the midst of bath troubles.

"As has been hinted already, the *abuse* of the bath solution is oftenest the cause of its refusal to do its duty. It should not be overworked. It should be kept at a proper degree of warmth in winter and of coolness in summer. All the other chemical solutions should be made to work in harmony with it. These things being properly attended to, there should be no unusual trouble with it."

Judging from Mr. Wilson's remarks on collodion transfers, we imagine he has in his mind's eye those intended for being painted upon in oils, and many of which, as he justly says, are "gray and unpleasing in color." Having had an extended experience with this class of work, we are enabled to say that, by having a collodion and other chemicals properly adapted, transfers may be made with *unfailing regularity* of any of the following tones: purple, jet black, blue black, engraving black, brown, gray, sepia, or red. The tone selected must, of course, be dependent upon the nature of the picture wanted, and whether it is to be colored in oils or water, finished with crayon or chalk, or framed without being touched.

Outdoor photography is not forgotten in this comprehensive *Photographics*, nor must we omit to say that several writers on gelatin emulsion are called to the front.

We are tempted to give just one more quotation on the subject of exposing in the camera, and it will be brief: "The time of exposure must next be considered. Too much impatience is indulged in here. *Take enough* exposure whenever the subject in hand will permit it. Do not *under* time, if you can help it. To secure the proper brilliancy and charm of effect, *time* must be given. *Effect* first, and time afterwards, is the rule. Yea; *effects* at *any* sacrifice, rather than sacrifice them for the sake of rendering it a little easier for your model. If there is a prevailing fault among photographers, it is that of undertiming."

We observe that the "Troy weight" frequently made use of throughout *Photographics* differs in some measure from that recognized in England, where, consisting of grains, pennyweights, and ounces, it is used solely for weighing the precious metals. In the editorial formulated matter of the *Photographic Times* we invariably adhere to the use of the grain, drachm, and ounce in preference to any other, even to the centigrade system, admirable though it be; but the time for introducing which, Mr. Wilson's example in many instances notwithstanding, seems scarcely yet, in the estimation of many of our readers, to have arrived. But we earnestly indorse Mr. Wilson's idea that the sooner it arrives the better we shall like it.

Before concluding, we beg to say a word of Mr. Wilson in his capacity as editor of the extensive notes which appear in his *Photographics*, and we do so without asking his permission, especially as we see no reference to it in the work itself. It is this: Mr. Wilson must not be for a moment held as indorsing *all* the opinions of those writers quoted. He simply presents them as the opinions of certain men of recognized position in the world of photographic art, and whose names are a guarantee for the genuineness of their utterances. The reader must exercise his own judgment when reading these notes. This much we feel constrained to say on behalf of our friend the author, to prevent a misconception which, however, can only exist in the case of very few.

We now take leave at present of this valuable and suggestive book, which is, without any doubt, the greatest effort yet made by its author. We have spent some pleasant hours in its company, and shall hope to spend many more. It demands a position in the library of every photographer, and this position it will assuredly attain as soon as its merits become known.—*From the "Editor's Table" of the Photographic Times and American Photographer.*

EDWARD L. WILSON, PHILADELPHIA—HIS NEW WORK.

ABOVE all, it is necessary that the literature of science shall be intelligible, simple, and exact. Unless its statements are lucid, unless its data are precise, it is liable to lead inquiring minds into error and to perplex and confuse, instead of teaching. Where directions for performing difficult and delicate manipulations are given, they cannot be too precise, and it is better to go into details than leave anything to guesswork or unscientific experiments. The obverse of this has been too much presented in the literature of photography, at least in those portions of it which have been supplied by French, English, and German writers. That the same has not to be said of photographic text-books emanating from the American press is largely owing to the practical common sense of American writers, and largely to Mr. Edward L. Wilson, who nearly eighteen years ago established the *Philadelphia Photographer*, a monthly illustrated periodical which has long stood at the head of the particular class of scientific literature which it represents. In the same line are several volumes of *Photographic Mosaics*, also edited by Mr. Wilson; the whole being supplemented by an interesting volume of 352 pages square octavo, entitled Wilson's *Photographics.* This consists of a series of lessons, accompanied by notes, on all the processes which are needful in the art of photography. To illustrate the text there are prototype portraits of the author and on a single page eleven miniature portraits of Miss Adelaide Detchon, a fair dramatic celebrity, and 118 photo-engravings and wood-cuts. The book is completed by a copious and really instructive index. We have no hesitation in saying that Wilson's *Photographics* is an elementary masterpiece, from which all who are curious in photography, either as a science or a professional art, cannot fail to obtain a vast quantity of precisely the particular information they desire. Published by Edward L. Wilson, 912 Chestnut Street, Philadelphia.—DR. R. SHELTON MACKENZIE, *in The Evening News, Philadelphia.*

WE have just received from our learned colleague, Mr. Edward L. Wilson, director of the *Philadelphia Photographer*, a beautiful volume styled Wilson's *Photographics.* This important work, added to those already published by him, does not contain less than 350 pages of text, illustrated by a very great number of cuts; it is divided into twenty-seven lessons, passing successively in review the whole photographic art, describing all the processes that may be used in the practice of photography.

This work, that we cannot recommend too highly to our colleagues who desire to possess a complete photographic library, is still further adorned with two phototypic plates, made with extreme care and clearness in the ateliers of Mr. Gutekunst.

The epigraph which accompanies this title is as follows: "The camera is more powerful than the pen or the pencil;" a great truth, and becoming more true with the progress in scientific observations due to photography.—LEON VIDAL, *in the Paris Moniteur de la Photographie*, June 15, 1851.

WILSON'S PHOTOGRAPHICS.

AMONG the photographic writers of America, E. L. Wilson stands without a compeer. A thorough knowledge of the literature, an elegant style of writing, a concise but comprehensive manner of expression, and enthusiasm for the object of his efforts, distinguish him in a like degree, and he once more claims our thanks and admiration by his recently published excellent work, bearing the aphorism: "The camera is more powerful than the pen or the pencil," and containing a summary of the fundamental rules of photography; not alone from the technical and chemical, but also from the æsthetic standpoint. Wilson arranged the subject in a new and original manner. He boldly places the æsthetic at the head of all, and he is right in this. In seventy-six pages he gives a summary of the science of perspective, arrangement, contours, and lines. Then follows the details about the camera, lenses, and arrangement of the studio. All the chapters are very liberally illustrated with instructive wood-cuts.

The author has arranged the subject so that numerous annotations from the most prominent English, German, and French authorities accompany the chief rules contained in the text. Special attention was given to the latest photographic processes, as the gelatin process, and Dr. Vogel's emulsion, so that the work stands on the basis of the latest photographic standpoint; and the success of this latest gem of photographic literature in English reading circles will, no doubt, be as great as the merit of the work deserves.—DR. VOGEL, *in Photo. Mith.*

THE *Photographische Archive* of this month says, in regard to Mr. E. L. Wilson's *Photographics:* "This excellent work, which is by far the best photographic book ever published in America, has the great merit of having annotations containing the views of prominent experts and authors, accompanying the 369 paragraphs. Mr. Wilson has apparently worked with the utmost perseverance, and he succeeded in giving the public a book which will, no doubt, be received with much pleasure, and read to great advantage by his countrymen. His device, 'The camera is mightier than the pen or the pencil,' is true indeed, and ought to embellish every photogram."

[We have reprinted the above notices of the press at the risk of appearing immodest, because we think there is often a great deal of instruction to be had from the review of any good work. Moreover, it is only just that the intending purchasers of a book should hear something about it from others besides the publisher.—ED. *P. P.*]

A CALIFORNIA BLISTER CURE.

IN reading your journal, I have formed an opinion that all photographers are troubled with blisters in using double-albumen paper. I have always been troubled myself, more or less, until lately, but never very seriously; the thought struck me that to let a small stream of water run into the tub containing the hypo and prints, would get rid of the blisters. I tried it, and have been doing so for two weeks, and have failed to see a blister. I allow the water to run into the tub fifteen or twenty minutes, then empty the water all out, fill with water again, and then pick out one at a time, and put them into the tank, where they stay three or four hours. Don't know how this would work with any one else, but it won't cost anything to try.

J. G. SMITH.

VALLEJO, CAL., June 23d, 1881.

A CALIFORNIA PROCESS-VENDER SHOWN UP.

HEREIN is a process-vender. Really, I think he surely has some *good points.* If you like, show him up. And here is how we enamel in California—and no *ten dollars for it.* Secure plate-glass, clean it *clean* with potash, then flow with solution of white wax and ether, thin solution; rub off all excess until polished. Flow the plate with plain collodion (eight grains of cotton to one half ounce of ether and half an ounce of alcohol); set the collodion side towards the wall to dry, free from dust. Mount your prints (have them pretty dark) on thin drawing-board; dissolve *Cox's* white gelatin in cold water, heat, and have *almost boiling*, and as thick as syrup; place your plate, collodion side up, on three pegs, so that their tops are level; pour the gelatin along the front edge of the plate. Place the mounted sheet of prints in the *clip*, to hold them firmly by the front of glass; take prints in the left hand and, with even pressure and steady hand, roll over with a steel roller, to press out air; set away to dry. The next morning your prints are all enamelled. Run a sharp knife around the edges, and the prints come off with a *click;* set your glass, clean side to the wall, and use again right along. I have seen glass used thusly weeks' at a time. *But*, enamel however as you may, gelatin, even though you clarify with the white of an egg, *will* turn yellow, and your prints, after you carefully trim them down, and tack a little glue around the corners, and put them in a cameo press to keep them down on high-toned gilt-edged mounts—even then, yellow. Old age comes on, the corners come off, and your thunder that was to be of fine finish, echoes back to you "Where-ere-re?"

I have made few latterly, though sixteen years ago they were novelties, and about every five years some one discovers a comet in the photographic atmosphere, and issues the gelatin finish under a new and fancy name. Like the June-bug, they have a short run, and then "you kinder wish you hadn't." However, if "there's millions in it," whittle 'em out and be happy.

J. P. Spooner,
Stockton, Cal.

This is what the vender says:

"Enameling Made Easy.

"One year ago I learned a simple method of enameling photographs, but found many drawbacks and imperfections. Since that time, by careful study and continual experimenting, I have reduced the process to such perfection that I can glaze any number of photographs, giving the most brilliant gloss, without the loss of a single print by any imperfection.

"It is not difficult to do, and can be done by any photographer by following the directions strictly.

"I will send full directions, so minutely describing every manipulation that you cannot fail to make it a perfect success, on the receipt of ten dollars.

"To fit up for the enameling requires no outlay.

"The enamel is perfect, giving to the surface a gloss equal, if not superior, to any ever produced, besides softening the picture, and giving to a really coarse one a fine and beautiful appearance.

"For this small outlay you can add to your business one of the greatest improvements of the day in photography."

Santa Cruz, Cal.

SOCIETY GOSSIP.

The Nashville Photographic Association.—This Association was called to order with President Patterson in the chair. Roll called. Minutes of last meeting read and approved.

The Committee on Rules and Regulations was discharged.

Communications were read from Professor N. T. Lupton and Mr. J. S. Roach, thanking the Association for the honor of election to honorary membership. Also, a communication from Mr. Edward L. Wilson, acknowledging receipt of minutes of previous meetings. The communications were placed on file.

Mr. Taylor moved that the Constitution and By-Laws be printed. Carried.

President Patterson proposed the name of Mr. C. C. Hughes as an honorary member. Carried.

The discussion of the subject of "Failures," was taken up.

Mr. Reisman stated that there had been a great deal of trouble among the photographers on account of paper blistering, and would like to hear from the members.

Mr. Overland said that the use of sal soda in the hypo was very good, also alcohol in the water before fixing. He said, some might think that alcohol would injure the prints, but it did not.

Mr. Mahon said that he had tried alcohol in the water before fixing, but it did not seem to do any good.

Mr. Root said that a strong solution of alum after the hypo, prevented blisters.

President Patterson said that alum caused the prints to crack.

Mr. Root said that possibly the solution of alum was too strong; he thought the prints are more apt to crack if they were hung up to dry than if they were mounted wet.

Mr. Overland handed the Secretary an article on "Photographs in Natural Colors," to read. After a few comments by the members, it was passed over.

President Patterson stated that he had read an article on photographing by electric light, but it seemed that, so far, it has not been a success, but it was being used in solar printing.

The Association adjourned to meet the first Thursday in July.

OTTO GIERS,
Secretary.

CHICAGO PHOTOGRAPHIC ASSOCIATION.—A regular meeting was held at Douglass, Thompson & Co.'s warehouse, 229 and 231 State Street, on Wednesday evening, July 6th, 1881. Mr. A. Hall, President, in the chair. Meeting called to order at 8 o'clock. The minutes of the last meeting being read by the Secretary, some members called attention to the fact that, in the report in the *Philadelphia Photographer*, there was an error in the citric acid formula as given by Mr. Smith—the amount of citric acid reading one ounce, instead of one-quarter ounce, as it should have been.

It was shown by the Secretary that the formula was correctly printed in the proof sent by Mr. Wilson, and which he had just read to the meeting.

Mr. Smith observed that he had since reduced the proportion of citric acid to one hundred grains; and, also, from a suggestion he obtained from the *British Journal* (he thinks made by Col. Stuart Wortley), he now soaks his plates in ammonia and water (without bromide) before adding the other ingredients.

Mr. Smith's formula, as he now works it, is as follows:

Solution No. 1.

Ammonia, . . .	1½ ounces.
Water, ...	7 "

Solution No. 2.

Citric Acid, . . .	100 grains.
Ammonia Bromide, .	1 ounce.
Pyro, ...	1 "
Water, ...	8 ounces.

For an 8 x 10 plate, take 60 to 90 minims No. 1 to 8 ounces of water; pour into a dish, and soak your plate in it for a minute or two; while it is soaking, take 30 to 60 minims of No. 2, pour off your ammonia solution from the dish into it, and return the mixture to the dish, when development will commence.

Samuel Bailey, Jr., was elected an honorary member.

The Committee on arrangements for entertaining delegates to the New York Convention, passing through the city, reported no action taken since the last meeting.

Mr. Smith, of that committee, moved to take up from the table the motion made at the last meeting, to defray the cost of badges by subscription.

Mr. H. G. Thompson, another member of the same committee, offered as an amendment, "that those present be invited to step up to the Secretary's desk, and pay up such amounts as they might see fit." Carried.

Most of the members present responded to the invitation.

Mr. Douglass read a letter from Mr. W. J. Baker, of Buffalo, to the effect that he would be glad to exchange specimens of dry-plate work with any of the Chicago photographers engaged in that line of work, and inviting correspondence from any so disposed.

Mr. Greene, referring to Mr. Smith's remarks on soaking plates in ammonia before adding pyro, said that about half of his work had been done by soaking plates first in the ammonia and bromide solution (Nelson formula). The difference between this treatment and that described by Mr. Smith, consisted in the fact that the latter leaves out the bromide.

Mr. J. F. Edgeworth said that, having partly developed a plate in pyro and ammonia, and failed to get anything like satisfactory detail, he had continued the development with ferrous oxalate, and obtained a good negative. Another thing he had done, which might be advantageous for some of the members to know how to do; he had exposed a 14 x 17 plate on one subject, and knowing it to be a failure, on account of movement, instead of developing it, or throwing it away, he soaked it for half an hour or so in a ten-grain solution of bichromate of potash, washed and dried it, and exposed it on a second subject, getting a good negative.

Mr. Beebe would like to have the members try the effect of hypo in the ferrous-oxalate developer; he found it to reduce exposure considerably, while giving very soft negatives. Those who tried it were liable to discouragement from the appearance of the plate at first, as it looks as though it would be a hopeless fog; but leave it in long enough, and it will fix all right.

Mr. Beebe's formula is: Make a solution of hypo, one ounce to six, and take one drop of this and one drop of bromide solution to each ounce developer (Eastman's formula).

Mr. J. F. Edgeworth related a peculiar experience he had met with lately in using Eastman's plates. Some of them, after developing and fixing all right, and perfectly clear in shadows, had turned a very decided yellow in drying. He would be glad if any one present could explain this phenomena. No one, however, seemed able to throw any light upon it.

Mr. Greene exhibited a print from a gelatin negative, almost covered with black spots, corresponding to transparent spots in the negative; he thought they were due to dusty glass, *i. e.*, glass which had been carelessly dusted before coating. Another trouble he had experienced lately with some of the commercial plates he had been using, was a tendency to flatness, and an absolute refusal to come up to printing strength by any method of intensification he was acquainted with.

The Chair.—Gentlemen: there is a little matter to which I would like to direct your attention. Two meetings ago I took occasion to refer to an article in the *Photographic Times*, written by Mr. E. L. Wilson, which spoke in very disparaging terms of photographic societies in general, and made no exceptions. The same gentleman, writing in the same periodical, now says he had intended to except the Chicago Photographic Association from this wholesale condemnation, and hold it up for a shining example to those others which are wallowing in the mire of general uselessness, but that in his haste he forgot this part of his subject! I will read you the article, so you can judge for yourselves (reads article by E. L. W., in June *Photographic Times*). Now, gentlemen, speaking for myself, I feel like thanking the gentleman for thus holding us up as a beacon of light in the midst of the heathen darkness in which all other societies are hopelessly groping, and I would like to get the sense of the meeting on this point.

Mr. Klein moved that Mr. Wilson's apology be accepted. Seconded by Mr. Greene, and carried unanimously.

On motion adjourned to first Wednesday in August.

F. H. Davies, *Secretary*.
No. 78 Michigan Avenue.

Association of Operative Photographers of New York.—A regular meeting was held June 1st, President Coonley in the chair. One member was elected.

The Scovill Manufacturing Company, presented, through J. T. Taylor, Esq., a copy of E. L. Wilson's *Photographics*, for which the thanks of the Association were tendered.

The discussion on "Retouching Negatives" was then resumed. Mr. William McLaughlin exhibited several negatives, and prints therefrom, etched on smoked surface, and otherwise embellished. He described as far as his knowledge goes, the "Osborne" process, which, being patented, is not accessible to the fraternity at large. He thinks that Osborne, after obtaining a smooth surface of smoke, works upon it by means of a graver and stump.

Mr. Hallenbeck.—The Osborne process can be bought for $100.

Mr. Forbes.—Sarony paid $4000 for a city and county right, but has so far not reaped any benefit from it. Mr. F. Pearsall, who also purchased the process, has had a similar experience.

Mr. Baumgarten has frequently introduced artificial backgrounds on plain grounds with color, brush, and pencil. All that is necessary to do so successfully is, besides the technicality, taste and the ability to draw and to handle a pencil. All members present acquainted with Mr. Baumgarten's attempts pronounce greatly in his favor over other processes or attempts.

Subject for discussion in next meeting: "Printing in all its Details."

Meeting of June 15th.—President Coonley in the chair.

The *Philadelphia Photographer*, *British*

Journal of Photography, *Photographic News* (London), *Photographic Times* (New York), and Anthony's *Bulletin* were received with the thanks of the Association.

The committee on rendering aid and assistance to the Photographers' Association of America, on their proposed Convention in this city, report: "We cannot come to any satisfactory results in the matters proposed, and request to be discharged from further service." Discharge granted.

The Messrs. Taylor, Bûhloe, and Ehrmann discussed superficially, "Obtaining Negative Copy from Negative Direct," and wish to make it a regular subject when in order.

For want of the presence of a regular number of printers, "On Printing," was postponed till next meeting.

Meeting of July 6th.—President in the chair. Two new members were elected. The usual number of photographic periodicals were received with thanks.

P. Bühloe reported sickness and distress of a member. A committee was appointed to inquire into the matter, with limited power to act.

Mr. Atwood opened "On Printing." He first gave full details of the manufacturing of albumenized paper, and the preparation of plain paper. The best to work upon is albumen, derived from several sources, though pure egg-albumen being preferable. If the amount of chloride in the paper is in conformity with the silver bath, and the paper having floated a sufficient time, there is no doubt of success. Measles, mottling, blisters, etc., are resulting only when paper and silver do not work in harmony. Mr. Atwood uses a neutral solution of from fifty to sixty degrees strength, and floats his paper a considerable time.

Mr. Hendrickson joined Mr. Atwood in describing the method of working, and went largely into a review of describing the different brands of paper in use, the superiority in some cases and inferiority in others.

Blisters have never been met by Mr. Atwood; they are unknown to him, and he pronounces them the consequence of improper treatment of the paper.

Mr. Kane admits that different paper requires different treatment, but thinks that blisters will always occur with an alkaline bath.

Mr. Bender mixes an old hypo bath with part of a new, thus preventing the blistering.

The Secretary believes in an equalization of the temperature of all liquids employed in toning and fixing. The immersion of the prints in a strong salt solution after the hypo is also recommended as a remedy for blistering. He thinks that the sudden removal of the print from dense solution to one of less gravity will result in a practical contraction, thus forming blisters.

The subject, being so extensive, will be discussed in several meetings.

CHARLES EHRMANN,
Secretary.

PHOTOGRAPHIC SOCIETY OF PHILADELPHIA.—Minutes of the regular meeting held July 6th, 1881. In the absence of the President and Vice-Presidents, Mr. John C. Browne, was elected to fill the chair.

The minutes of last meeting were read and approved.

The Secretary showed a copy of the specification of the patent granted the Scovill Manufacturing Company for their plateholder, which was interesting as showing in what the so-called improvements consisted.

On motion, the report of the Committee on Holder was taken from the table, accepted, and the committee discharged.

Mr. E. Wallace, Jr., exhibited some prints made on paper, which had been kept over night, after fuming, but, owing to the alum used in the silver bath, were clear and brilliant, and showed no signs of discoloration. He stated that 6 drachms of a saturated solution of alum to 70 ounces of bath gave the best results.

Mr. Bell also stated that he had used the alum bath with good results.

Mr. Castner gave some of his experiences with gelatin and described a new formula for ferrous-oxalate developer, which he said gave good results.

Mr. E. Wallace, Jr., presented the Society with a handsomely framed photograph of "A Timbered House at Bayeux," which was greatly admired by the members.

The Secretary exhibited a new form of instantaneous shutter, designed and constructed by himself, which possessed many new features. It consisted of a light brass frame, fitted to the hood of the lens by a clamp-screw in such a way as to admit of its being put in any position; sliding in this frame was an oblong shutter of hard rubber, having in the centre an aperture of the size of the opening of the lens. This shutter could be made to fall by its own weight, or, in case the shutter was wanted to move horizontally, a lever operated by a spring, the tension of which being controlled by a set-screw, would give it the necessary motion. By an arrangement of springs, the jar from the falling shutter was taken up, and the shutter locked so as to prevent any rebound. A pneumatic trigger gave the operator complete control of the exposure. By varying the adjustment, exposures of from half to one-fiftieth of second could be obtained.

The President exhibited a number of old drawings intended to be viewed in the stereoscope; also an early specimen of the Talbotype process, by Langenheim, prior to 1850, which he presented to the Society.

The Secretary suggested that the Society should exhibit specimens of work by its members at the next fair of the American Institute of New York.

On motion of Mr. Wallace, a committee of two was appointed to investigate the subject and report at the next meeting. The Chair appointed Messrs. Wallace and Pancoast.

On motion, adjourned until the first Wednesday in October.

C. R. Pancoast,
Secretary.

ROOT'S COOLING CONTRIVANCES.

Last year, at the Chicago Convention, Mr. Samuel Root, the veteran photographer at Dubuque, Iowa, gave us models of contrivances he had in use for cooling the bath, and for keeping collodion and other solutions cool and of equable temperature during hot weather. We have had drawings made of them, which tell their own story. Fig. 1 represents the bath-cooler, which is a simple box or case A, so contrived, with a metal case inside, and outlet for water, as to hold lumps of ice underneath and over the glass bath-holder.

Fig. 1.

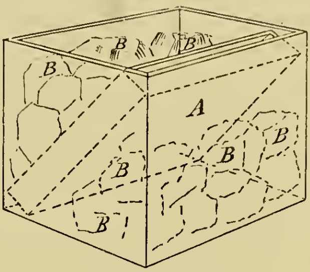
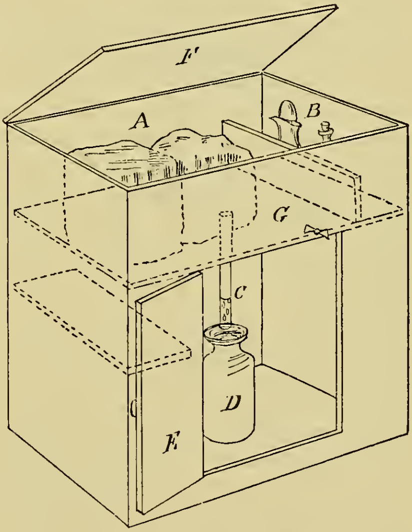


Fig. 2 is the closet or receptacle for keeping collodion, developer, etc., cool, and divided into the ice-box A; a receptacle for bottles and vials, B; an outlet, C, through which the drip flows into the vessel D, and the door E. Shelves are provided here and there for vials, etc. The size may suit the convenience of the user. This method of using ice for the purposes named, is a good one, and will prove a boon to many who have not thought of it.

Fig. 2.



Wilson's *Photographics* will make the convention more enjoyable if read beforehand. $4.00. See advertisement.

IMPROVEMENT IN THE PROCESS DESCRIBED LAST MONTH,

And Experiment Relative to the Cause of Sensitiveness of Gelatin Emulsion.*

At the last meeting of this Society I described a new process. It will be remembered that in this process a sheet of paper is covered with gelatin emulsion, exposed in the camera, developed with pyrogallol, and then cemented to the glass or other impermeable support; and by treatment with hot water, from the side opposite to that exposed to the light, the image is obtained. But this image is reversed, and, if required for silver printing, it could not be used without double transfer. Since that time I have succeeded in doing away with the necessity for double transfer by the following method:—After the sheet of gelatin-emulsion tissue is exposed and developed with pyrogallol, a glass plate is rubbed with talc (French chalk), and covered with plain collodion. When the collodion is set, but before drying, it is immersed in cold water and left until all greasiness disappears. The developed image is then put in contact with collodionized glass, all excess of water removed with an india-rubber squeegee, and the glass is left to rest for about ten minutes. It is next immersed in warm water, the paper which was used as the support of the tissue is peeled off, and all soluble gelatin removed by washing. Next, a sheet of gelatin, similar to that used by engravers for tracing, is immersed in cold water until softened, and, by means of the squeegee, cemented to the previously dried image. When this is dry, which takes place in the present season (June) in about two to four hours, it is easily peeled off, and in this condition it presents a flat sheet of gelatin, with the image permanently fixed. In order to render it proof against every possible accident that can occur during the printing, it is advisable to give a coating of collodion before the gelatin sheet is peeled off. Prepared in this way, a film negative being protected from both sides with collodion, it cannot be injured with damp, so that it may be washed with sponge or immersed in water for a short time. It can be printed from both sides, and it will be seen by the specimens sent around for inspection that the thickness of gelatin does not affect the sharpness in printing. It is useless to dwell upon the utility of having negatives upon the film rather than on glass.

Since my last communication regarding gelatin emulsions several persons have tried the system, and some have complained that the developed image is rendered totally insoluble by the action of pyrogallol, or that the surface film remains insoluble. This will always be found to be the case when gelatin emulsion is rendered insoluble by the addition of alum, or other treatment, during its preparation; therefore that kind of emulsion must be used which produces a film soluble in warm water. I found, however, that, even in the case of insolubility, the addition of acetic acid and using the water warmer are a great help.

I should like to communicate a phenomenon observed by myself, which may help towards the explanation of the cause of the sensibility of silver bromide. I found that if the surface of a gelatin-emulsion plate—glass or paper—is pressed, those parts which are subjected to pressure are rendered less sensitive; this is made evident in the development. At first I thought that the pressed parts are not so easily acted upon by the developer; but the following experiment cleared up my doubts. I wrote on a sensitive plate some words with an ivory stylus—not scratched—then exposed it to light, and I wrote again after exposure in a similar manner. In the development the words written before the exposure appeared light on a dark ground, and very distinct; those written after the exposure, either were not visible at all, or appeared darker than the rest of the plate, and this experiment was tried many times. Reasoning that, if the compression of the film diminishes the sensitiveness, the reverse action must have the effect of increasing it, I moistened with water the film before exposure, and the result gave the proof of my supposition.

The approaching summer recess, and my own intended absence from England, decided me to hasten the communication of this isolated observation, in order to contribute data showing that the previously-expressed opinion by Captain Abney is strictly correct, viz.: that the superior sensitiveness of bromide of silver in gelatin is not due to any difference in its chemical composition, but solely to the difference in its molecular conditions as compared with collodion emulsion. It is also evident that it will not be safe to rub or otherwise press the sensitive surface. In the experiments described I found that a very slight pressure produced a visible effect; in fact, my first observation was made on the sheet of tissue at the back of which a number was written with pencil.

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*A communication to the Photographic Society of Great Britain.

LEON WARNERKE.

ASSEMBLING.

KNOWLEDGE is power! To be well informed, especially in one's profession, should be the desire of all. No brother is too old to learn, or so rich in photographic lore that he can afford to lose the golden opportunity which the coming Convention offers to the sons of the art photographic.

In a little over three weeks from present writing, the members of the Photographers' Association of America will assemble in New York, to take part in what must prove the most beneficial and interesting photographic meeting ever held in this or any other country. Photography, notwithstanding the high position it now occupies as an art-science, is still capable of further development, and the one grand object for which the Photographers' Association of America was organized, is to aid in disseminating knowledge pertaining to the art and science of photography. Never before has there been such elaborate preparation made to dispense knowledge to those willing to attend and receive it. The mutual benefit to be derived in associated effort by the members of the Photographer's Association of America, has been so well and ably discussed by our Permanent Secretary, Mr. G. A. Douglass, that I feel it superfluous to add anything on that head. Our Local Secretary, Mr. Seavey, has made ample provision for the demonstration by able and skilled practitioners in the art of lighting, posing, and chemical manipulation, to witness which cannot help benefiting the observer. Our manufacturers will place before you the newest in apparatus, chemicals, accessories, etc., so that an intelligent knowledge may be gained of the progress in those departments.

It seems incredible that any one making photography his business, should value the slight cost in time and money above the knowledge and pleasure to be derived by attending these annual Conventions. To any yet doubting, I recommend their perusal of Treasurer Hesler's letter in the June journals.

To one and all I give a hearty welcome to the Convention of the Photographers' Association of America, convening at New York, August 16th, 1881.

JOHN CARBUTT,
President P. A. of A.

PHOTOGRAPHER'S ASSOCIATION OF AMERICA.

"PRESENT!"

THAT is what we would like to hear from every member when the roll-call is made, Tuesday morning, the 16th. Get there on time, if possible, that no delays may occur, and not a moment be wasted. We want the business of the Convention done promptly, and all the time that is possible given to practical educational work. Our Local Secretary, Mr. Seavey, has placed before the members of the Association and the fraternity a full exhibit of what is expected, and each day's programme will be made up of valuable practical demonstrations for the studio and field.

Those interested in any branch of our art-science will find something to learn from this Convention. Now that the Association is fairly on its feet, it is hoped that the fraternity in whose interest it is formed will take hold of it earnestly and make it the great power for good it is capable of being. Give it your support and encouragement, and it will bring back to you an hundredfold. Photography and photographers have need of such an organization as this, and having one so nicely started, each one should do his share towards building it up. If you cannot come this year, add your name to the roll of members and feel that you have done that duty which prepares you for the following year.

Gayton A. Douglass,
Secretary.

PERTAINING TO THE

Executive Committee of the Photographic Association of America.

Agreeably to call by the President, J. F. Ryder, Esq., a special meeting of this committee was held at the Aveline House, Fort Wayne, Indiana, on Wednesday, July 27th, 1881; present, Messrs. J. F. Ryder, of Cleveland; G. A. Douglass, of Chicago, and Edward L. Wilson, of Philadelphia.

The emergent subject in hand was the completion of arrangements for the coming Convention, and the preparation of the annual report.

The committee believe a grand affair will result, and hope to see a large attendance.

Adjourned to meet at the Exhibition Hall on Monday, August 15th, at 2 p. m.

Edward L. Wilson,
Secretary.

The railway arrangements for the Convention are given below, so far as anything has been done by the committees asked by Secretary Douglass to assist him.

As a general thing, all the main railway lines of our country issue excursion tickets to and from New York. These can be taken advantage of by attendants upon the Convention, and much money saved.

The programme of the proceedings cannot be completed in time to announce here, but we are assured that every preparation that the means in hand will allow is being made to make the meetings thoroughly practical, instructive, useful. Only attend diligently, and be assured a great rise in photographic securities will be sure to take place.

Friend Wilson:

Will you please mention in the August *Photographer* the rates offered by the New York, Pennsylvania, and Ohio Railroad to the Photographic Convention. Tickets can be had from C. H. Jordan, at Mr. W. D. Gatchel's, 168 Race St. (this city), for $20.00, from Cincinnati to New York and return. A great many will go by this route from here. Respectfully,

J. Landy.

Cincinnati, July 9th, 1881.

Dear Sir:

It affords us great pleasure to announce that we have made arrangements with the Great Western Railway, by which all desiring to attend the Second Annual Convention of the Photographers' Association of America, to be held in New York city, commencing Tuesday, August 16th, can do so for $16.00 for the round trip to New York and return. The Great Western Railway is the shortest and most direct line between Detroit and New York, *via.* Niagara Falls, and makes close connections at Niagara Falls with New York Central and Erie Railways. You can stop over at Niagara Falls if you desire to do so.

You need confine yourself to no particular train, but can take the 4 a.m., 8.35 a.m., 12.45 p.m., 7.05 p.m., or 11.50 p.m. train on Saturday 13th or Monday 15th of August.

Tickets are good for thirty days.

Linen dusters optional.

The benefits of the Convention to you are manifold and obvious.

Should you desire to avail yourself of this opportunity please advise us as early as convenient. Respectfully yours,

Allen Bros.

Detroit, July 7th, 1881.

Secretary Douglass' Circular.

To accommodate members and others desiring to go, we have arranged an excursion from Chicago to New York City and return. Tickets for the round trip will be $20.00. The excursion will leave here Saturday afternoon, August 13th, on the

Pittsburg, Fort Wayne, and Pennsylvania Central Railroad, *via.* Philadelphia, arriving in New York Monday morning, giving ample time for all to secure hotel accommodations, and get ready for the business of the Convention, Tuesday morning. Pullman Palace Sleeping Cars will be provided at reduced rates. Our excursion will leave Chicago with delegates from St. Louis and Milwaukee, and at Pittsburg we shall be joined by the delegates from that city, Cleveland, and Cincinnati. The Pennsylvania Company will put on their Observation Car at Pittsburg, taking us through the magnificent mountain scenery of this route by daylight.

The Convention will undoubtedly be the best ever held by the fraternity, and indications point to a large attendance. If you want to see what wonderful progress is being made in the art-science of photography, attend this meeting. Read the journals and get full particulars. We have got low rates of transportation, hotel accommodations will be at reduced price, and everything done to make the trip inexpensive.

Aside from the benefits of the Convention, it allows you an opportunity to visit the East at a very low rate, and will give you a chance to take a little vacation from business at small cost. If any of your patrons desire to go, you can send for tickets, and they will be made a part of our excursion. Tickets will be good for thirty days.

If you have decided to go, please send for tickets without delay, that we may have time to provide ample accommodations for the comfort of the excursionists. To secure tickets, send remittance to either A. Hesler, Treasurer, 96 State Street, or

GAYTON A. DOUGLASS,
Secretary Photographers' Association of America,
229 and 231 State Street, Chicago.

MR. F. M. LACEY, of Indianapolis, Ind., informs us that tickets from that city to New York and return, will be issued to members of the Photographers' Association of America for $22.75, good for one month.

ALL ABOARD FOR THE PHOTOGRAPHERS' CONVENTION! ARE YOU GOING?

Dear Sir: The Second Annual Convention of the Photographic Association of America will be held in New York City, commencing August 16th next. Unusual efforts have been made by the Executive Committee to present the most attractive programme of exercises that has ever been prepared for a similar occasion.

The tendency of everything about it will be toward the practical. The best talent of the country will be there to aid in the instruction and profit of the members. A skylight and dark-room will be prepared in the room where the Convention meets, and the most distinguished and successful operators and posers will give practical exhibitions of their methods, that will be of great value to all in the future. In addition to this all new inventions pertaining to the business will be on exhibition. Manufacturers of lenses, card-mounts, photo. chemicals, dry plates, albumen paper, retouching pencils, photo. apparatus, backgrounds, frames, etc., etc., will be there with a full line of their goods.

It will be like a world's fair, in which the best, newest, and most useful inventions can be seen. It will undoubtedly be the largest and most complete exhibition of everything pertaining to our art that has ever been gathered together.

HOW TO GO THERE!

I have been to the agents of all the leading railroad lines, and while there was great hesitation on their part in offering reduced rates, nearly all refusing to do any better than regular fare, I have at last got an agreement from one of the best roads to furnish tickets to all who desire to go (whether photographers or not) to New York and back, for $20.00.

It is proposed to start from Cincinnati Monday, August 15th, at 1 P.M. This will land you in New York on the evening of the 16th, and will avoid Sunday travelling. As nothing is done the first day but to enroll the members, you will be there in good time, and refreshed by a night's rest, be ready for the Convention. All who would prefer to start from here can come in on the Monday morning trains.

The tickets will be good for five days to go and for thirty days to return, and are good on all passenger trains during these periods. This gives you the option of returning soon if you are obliged to do so, or you can take in the watering-places for a month if you so desire. I believe these conditions are as favorable as could be desired.

Now, I would like to know who is going, as all tickets must be purchased by Mr. Jordan, who will accompany the excursion and represent me in the Convention. These tickets will be sold to all wishing to go East, whether photographers or not. If you have friends expecting to go invite them to join you, and help to make this a pleasant and profitable excursion.

Further particulars given on application.

Yours truly,

W. D. Gatchel,

No. 168 Race Street, Cincinnati, O.

We are happy to be able to announce that special round-trip rates have been obtained from this point. Persons wishing to avail themselves of this reduction must address the undersigned, as tickets can be procured only through them.

The rate from Indianapolis to New York and return will be $22.75. Tickets will be good to return for thirty days.

This is an excellent opportunity to visit the metropolis and the seaside for an unprecedentedly low rate, and we suggest that as many of our patrons as can do so, take advantage of this offer to secure a vacation on most reasonable terms.

The sale of tickets will close on August 15th. H. Lieber & Co.

Indianapolis, July 25th, 1881.

The fare for the round trip, from Milwaukee, will be $23.00, and any friends you desire to have go, can accompany you. It is necessary to have an approximate estimate of the number who will go, and I am requested by the members of the Executive Committee, to ask if you can join the Wisconsin delegation, that will start from Milwaukee on the evening of the 12th or morning of the 13th of August.

Please to give me a direct reply at your earliest convenience, and oblige

Yours fraternally,

W. Ayres Armstrong.

389 Broadway, Milwaukee, Wis , July, 1881.

The Whole Story of the Photographers' Excursion From Cleveland to New York and Return.

My circular of June announced the low price of $14.25 for round-trip tickets. I am happy to say now that I have got the figure down to $12.00, and no deduction will be made to parties who may join the excursion at any point after leaving Cleveland.

We leave Cleveland on August 13th at 11.30 p.m. by the Cleveland and Pittsburg road. Sleeper may be taken at any hour in the evening; price of berths, $1.50 each, or $3.00 for section. Parties preferring so to do, may take the train at 2.30 p.m. and take a night's sleep at Pittsburg, at which place, in the morning, we join the excursions from Chicago, Cincinnati, and St. Louis, and from that point expect to be sociable with "the great West."

We go over the mountains in daytime and will enjoy the grandeur of the Alleghanies. We arrive at Philadelphia at 6.45 p.m., and at New York 9.30 p.m. You return by the same route and have the opportunity to stop and see the attractions of Philadelphia without additional cost.

Tickets can be secured only through me, and the money for their purchase should be in my hands early, that I may know who is going, and have everything arranged in good season. Send post-office orders.

You can include any member of your family or any friend or friends, at excursion rates.

If you desire to start a day or two earlier, you can do so by securing your tickets in season. Parties who cannot start with the excursion, but who expect to join it at some point on the way, can have their tickets sent them by mail. If you want sleeping berths engaged, send the money with your order. Tickets are good for thirty days.

As it will be difficult for me to write letters of information, I have endeavored to cover all points here, and trust all may find on a careful reading everything he desires to know.

Yours truly,

J. F. Ryder,

Of Executive Committee.

Hotel Arrangements.

Inquiries in reference to hotel accommodation may be made by mail of A. H. Atwood, 2438 Second Avenue, who has kindly volunteered to take charge of this department; or, he can be seen, personally, at Mora's, 707 Broadway, between 4 and 5 o'clock, P.M.

Sturtevant House, Broadway and 28th Street; rates, $2.50 per day. Coleman House, Broadway, corner 27th Street; European plan; rooms, $1.00 per day. Hotel Hamilton, Broadway, corner 26th Street; European plan; rooms, $1.00 per day; a few single rooms 50 cents. Continental Hotel, Broadway, corner 20th Street; European plan; single rooms, $1.00; rooms for two persons, $1.50 and $2.00 per day. Westminster Hotel, 116 E. 16th Street, corner Irving Place; rates, $3.00 per day. Morton House, Broadway, corner 14th St; European plan: rooms, from $1.00 to $3.00 per day, according to location. Sinclair House, Broadway, corner 8th Street; for gentlemen only; rooms, $1.00 per day. New York Hotel, Broadway, corner Washington Place; rates, $3.50 per day. Grand Central Hotel, Broadway, between Bleecker and West 3d Streets; rates, $3.00 per day. Metropolitan Hotel, Broadway, between Prince and W. Houston Streets; rates, $3.00 per day. St. Nicholas Hotel, Broadway, between Broome and Spring Streets; rates $3.00 to $3.50 per day, according to location.

Dear Sir:

Please publish in your next issue, in regard to the prize offer for best negatives on our plates, that on request of several parties using them, the size of negatives competing shall not be limited, and that larger sizes are also welcome. Yours truly,

Cramer & Norden.

Notice to Photographers of United States and Canada.

The map of New York city, 16 x 24 inches, with a list of hotels, location, and special convention rates; routes and fare to suburban summer resorts; plan of American Institute, and other information, is now ready. Apply, stamp enclosed, to J. F. Ryder, Cleveland, Ohio; E. L. Wilson, Philadelphia, Pa.; E. Klauber, Louisville, Ky.; *Executive Committee:* John Carbutt, *President*, Philadelphia, Pa.; A. Hesler, *Treasurer*, Chicago, Ill.; Gayton A. Douglass, *Secretary*, Chicago, Ill.; L. W. Seavey, *Local Secretary*, New York.

A note received from Mr. L. W. Seavey, Local Secretary, in regard to the Exhibition of the Photographers' Association of America, requests us to state that screens will be reserved for those who may bring photographs in their pockets.

GERMAN CORRESPONDENCE.

Sensitizing Gelatin Plates with Nitrate of Silver—Failures of Gelatin Plates—Dr. L. Harnecker, Deceased.

I briefly mentioned in my last letter the sensitizing influence of nitrate of silver upon collodion plates, and now I will quote here the statement of one of my correspondents, Mr. Stosch, who employed nitrate of silver so successfully with common gelatin plates that he contrived to increase the sensitiveness of the same four- to five-fold. Of course, such plates must be used at once, the good effect of the nitrate of silver being noticeable only on the first day. Stosch took to 100 c.c. alcohol of 85 per cent., one to two c.c. of a solution of nitrate of silver, 17 grammes in 250 c.c. water, and added before mixing with the alcohol, 10 c.c. ammonia (the ammonia is of about three-fourths the strength recommended when used for the Nelson developer for Vogel's plates), and bathed the dry, finished emulsion gelatin plates which had been prepared according to Eder's statement, and had been washed thoroughly, in this bath, three to four minutes. Inside of five minutes after being taken out of the bath, the gelatin layer becomes dry. Stosch recommends, however, to use only quite new glass plates, and to clean the same very carefully, as otherwise spots and fog are developed, just like in the wet process, when the sensitiveness is sought to be increased to the highest degree by neutralization, concentration, warmth, etc. It would seem that without this even the plates should become stronger when developed through the influence of the presence of silver salt.

In spite of the energy with which experts and amateurs work on the improvement of the gelatin plates, it seems as if the latter were deteriorating in regard to quality of late, instead of improving, and it is a noteworthy fact, that at this date, after the gelatin process has been almost universally praised, more and more complaints are heard every day from competent quarters. Quotes Captain Pritchard in the *News:* "Gelatin plates are a great help for the photographer, although they do not always give first-class negatives. We have often examined the week's work of experienced operators in gelatin plates, and found some excellent, and others, in fact, the majority, of indifferent quality. Not a few were weak, dull, in fact bad. Some plates appeared crooked, and in consequence of unequal thickness in the layer; some were bad in the glass—some cheap trash, no doubt." Debenham says, in the *British Journal of Photography:* "When the gelatin plates were introduced, it was said that better results could be obtained with them than with wet-collodion plates. Now, when they are in more universal use, we find that in studios where clean negatives count among the rarities, the average quality of the same has been improved with the introduction of gelatin dry plates, while in *ateliers* where first-class wet work only had been made, the quality of work has rather fallen off, instead of showing improvement." Debenham draws the conclusion that while gelatin negatives, as a rule, are inferior to the collodion negatives, they do sometimes excel the latter. As gelatin negative defects, he mentioned: 1. Lack of clearness of the shades, which, however, is not always noticeable. 2. Deficiency of intensity of the brightest lights. This defect is pretty universal, but can be mitigated by judicious selection of the gelatin or the developer." Warnerke also recently spoke deprecatingly of the quality of the gelatin. Here are his words: "Unfortunately it cannot be denied that with common gelatin plates no such good results can be obtained as with wet plates, and the reason of this is, according to the opinion of several authorities, mainly due to the fact that one has not such full control of the intensification of a gelatin plate. Not that a gelatin plate could not be intensified sufficiently, on the contrary. In the wet precess those negatives are the best which do not show at once their full intensity in developing, but obtain the same by intensifying. To do the same with gelatin plates would be very desirable, but here the intensification is difficult. Mercury intensification has its drawbacks, as is well known, and silver intensification brings spots and red coloring, as the silver combines with the gelatin." I cannot but concur with these remarks. I have gelatin negatives of such surpassing beauty that I would not hesitate to state that I never obtained similar ones with the wet process; but I have many more other ones which are much inferior to the negatives obtained with the wet process. One defect, which has not been enumerated above, I must mention here, I mean the inclination to solarization of the gelatin plates, which is more marked with them than with wet plates.

During this present beautiful weather I repeatedly took landscapes, in which the sky appeared very thin, and which could not be intensified sufficiently by any expedient I had recourse to. In this respect my collodion-gelatin emulsion offers the decided advantage that it inclines much less to solarization, and my emulsion plate intensification also offers no difficulties, as plates can be easily worked, even with the common silver intensifier. Furthermore, the intensity of the negative can easily be increased to any extent desired with the potash developer by increasing appropriately the percentage of the bromide of potassium. The receipt for the potash developer I have given you before.

A few days ago, one of the old veterans of the black art was called from his incessant work, I mean Dr. Harnecker, in Wrietzen. Relinquishing his extensive practice, the deceased applied himself with zeal to photographic studies more than twenty years ago. We are indebted to him for various interesting communications in regard to the dry process; he perfected, especially, the rosin process to a high degree. Another yet more successful part of his work, were the enlargements, and here he deserved special thanks for his improvement of the calcium light, and the production of paper pictures with development. The deceased was always ready to go to considerable pecuniary expense to further the aims of his studies; and, to cite only a few instances, it was he who furnished the German Polar Expedition with photographic apparatus and dry plates; he heartily supported the efforts of Professor Czermak in regard to the objective teaching, and he stood in incessant, intimate intercourse with Professor Schellen, the publisher of the popular works on spectral analysis and the sun. His merits in regard to the sciences were eulogized by Professor Peterman, the geographer, who named a bay upon Nowaja Senelja after the deceased. A stroke of apoplexy forced him, two years ago, to give up his work, and since then he never rallied again. He died in May last, only sixty-one years old.

Very truly yours,

Dr. H. W. Vogel.

Berlin, July 1st, 1881.

FRENCH CORRESPONDENCE.

Concerning the Process of Mr. Ives—Explanation of the New Process of Mr. Warnerke—Actinic Power of Divers Sources of Light with Relation to the Lighting Power—Sensitive Pellicles of Mr. Stebbing—Bibliography—New Treatise on Carbon Photography by Mr. Lamy—Practical Treatise on Photoglypty by Mr. Leon Vidal—Use of Carbonate of Ammonia in the Development of Gelatino-Bromized Plates.

The last number of the *Philadelphia Photographer* (June, 1881), contains an excellent phototypographic portrait of our dear Editor, Mr. Wilson. This print, made by the remarkable process of Mr. Ives, has produced a great sensation among the judges who have seen it. Up to the present time, of all the attempts in phototypographic printing which have been made, none, we believe, has given such results. Our first act was to compare this print with the fine phototypic portrait of Mr. Wilson in his new and important work, *Wilson's Photographics*, and we saw to our great satisfaction, that typographic engraving, in spite of the cutting of the shadows, offered, as far as resemblance is concerned, the same printing value, the same delicacy in the half-tones as are found in phototypic reproductions. It is not for us to judge the issue raised in the question of priority between our honorable compatriot, Mr. Petit, and Mr. Ives, but recognizing the respective merit due to these two inventors, it is our duty to welcome the results of Mr. Ives, as we have already done for those of Mr. Petit. The work of Mr. Ives appears to us, we do not hesitate to acknowledge it, to have superior merits. This is for Mr. Petit a motive for serious emulation, and we are convinced, that thanks to this incentive towards progress, he will soon catch up with his amiable and very skilful competitor of the new world. We have no doubt that phototypography, thus treated, will gradually force itself in the illustration of publications containing vignettes; the greater number of portraits engraved upon wood are very generally bad likenesses; whilst, thanks to this process of direct reproduction, we would have, at least, portraits true to nature. One of ours, whose competence in the matter of photographic prints cannot be questioned, writes me to mention the good impression made on him by the typographic portrait of Mr. Wilson. I refer to Mr. Woodbury, and we could not pass over in silence the opinion of this high authority. We are pleased to hope that this process will rapidly spread, and that soon the greater number of publications will be illustrated by *Iveography*.

Mr. Warnerke has kindly sent us some explanations in regard to his new process of fixing gelatino-bromide negatives. We had not been able, in repeating his experiments, to arrive at the results indicated by him. We made known to him our want of success and thanks to the additional explanations published by this skilful colleague, we now believe in the possibility of utilizing, not so much the fixing process, which in itself does not offer much advantage, but the now established property of gelatin exposed and developed with pyrogallic acid as does gelatin which has been bichromatized and exposed. Mr. Warnerke says that an essential condition of success lies in the use of gelatin which has been freed of all elements liable to render it insoluble to the contact of pyrogallic acid, and he then adds that should it be necessary to overcome the solubility of the non-exposed portions of the film, it would be necessary to add acetic acid in small quantity to the hot water. We have verified these facts and succeeded in getting rid, by solution in hot water, of all the gelatin not utilized by the image. Incidentally we call the attention of our readers to the fact pointed out by Mr. Warnerke—that pressure on the film of sensitized gelatin diminishes its sensitiveness, whilst this last is increased, on the contrary, if the coating of gelatin is dilated,—by wetting it, for example. This simple indication may serve as a starting point for obtaining a greater degree of sensitiveness. The smallest fact has its importance in an art where a remarkable *whole* often consists of a combination of a multitude of small *nothings.*

The last meeting of the Photographic Society was not numerously attended, and little was done. We presented a short communication concerning a method for measuring the actinic powers of divers sources of natural or artificial light for a same lighting power. Our selenium photometer allows the bringing of all sources of different lights to the same galvanometric degree by modifying the distance of the plane of reception of the luminous rays. If, for example, we take for basis a deviation of the needle of 15°, it is possible, with the divers ascertained sources of light, to always bring back the receiving plane to the point at which the lighting power will be 15°; that is to say, will mark on the galvanometer by a deviation of 15°. Comparing diffused solar light with that of a candle, we have reached this approximate conclusion—that the light of day for the same photometric degree has an actinism or chemical force 12 to 15 times greater than the flame of a candle placed at 19 centimetres from the lighted plane. It is that of the selenium that is replaced by that of the sensitized film. This method seems to us excellent, as, owing to the marvellous property of selenium, we have a means of measuring the lighting power which could not easily be obtained in any other way. Here, instead of a tint more or less comparable with another, we have a movable needle whose position on a precise scale indicates exactly the intensity of the lighting power. We have recently described the manner of cheaply constructing selenium receivers for our photometric appliance. Greatly simplifying the instruments of this kind, we merely fill with selenium the spaces left free by the teeth of two brass combs, the one intercalated in the spaces left between the other, so that the comb on the right hand offers no point of contact with the one on the left. The selenium is brought, by remaining a few hours in a water-bath, to a crystalline state proper to make it a conductor of electricity under the action of the luminous rays. Up to the present time, our numerous experiments with this body, lead me to foresee many useful applications of this selenium photometer to photography.

Mr. Stebbing, our excellant colleague and friend, has distributed among the members of our society gelatino-bromized sensitized pellicles. Persevering in the direction of improving these pellicles he has reached excellent results. Let us hope that he will go still further, and thus render eminent service to our art in giving it a negative support, light, supple, perfectly translucid, and absolutely durable. Celluloid, which has recently been much talked about, is open, up to the present time, to the objection of easily warping. It is difficult to obtain, or rather to use it in proper condition. This has not prevented a well-known photographic investigator, Mr. Despaquis from patenting the use of celluloid in phototypy for producing phototypic (we were going to write photo-utopic) films, circular in shape, and to be printed on an endless roll of paper. At first Mr. Despaquis wished to do this with glass cylinders, but he found it difficult to produce cylindrical films of sensitized gelatin. Now, he hopes, thanks to celluloid, to be able to prepare a flat sensitized film to be afterwards applied to a cylinder. How much it is to be regretted, that instead of ceaselessly putting forth ideas, certain inventors should not commence by trying if they can be realized. How many useless patents would be avoided! How many utopian ideas would be spared to public credulity!

Two new photographic works made last night their first appearance. 1. *New Instructions for the Use of the Carbon Process and Transfer Paper*, by Mr. Lamy. This work is published by Mr. Hutinet. The high competence of Mr. Lamy in the carbon process offers full assurance that he has treated his subject with that conscience and over-scrupulousness in details, if I may be allowed to express myself in this way, which he brings to bear in everything that he undertakes. 2. *A Practical Treatise on Photoglypty*, by Mr. Leon Vidal. This work is published by Mr. Gauthier Villars, whose publications are made with all possible care. In regard to the value of the work, it is for a competent public, and not for us, to decide upon. We must confine ourselves to the simple announcement of the appearance of this treatise.

Mr. Chardon and Mr. Belaguy, two of our most distinguished photographic amateurs, have strenuously insisted on the use of carbonate of ammonia in developing gelatino-bromide plates, instead of ammonia. It is possible with this product to facilitate the development and especially to attain a much greater degree of intensity than with the ammonia. The following developer may be used: First have a solution of 50 grammes (1 ounce 5 drachms) of carbonate of ammonia in a litre (1 quart) of water, add to this from 3 to 6 grammes (46 to 92 grains) of bromide of ammonium. To a quantity of this solution suitable for the development of a plate, add, at the moment of using, a few drops of a solution of 15 grammes (4 drachms) of pyrogallic acid in 250 grammes (8 ounces Troy) of alcohol. The negative is less superficial, the image is better developed in the depth of the film, and acquires an intensity that would with difficulty be obtained by any other methods of development.

Leon Vidal.

Paris, July 1st, 1881.

Editor's Table.

We are indebted to many friends and patrons for the very kind words they have been pleased to say concerning *Photographics*. It would be an honor to us to publish them all, had we the room: "I have great pleasure in assuring you of the great value your *Photographics* has been to me. I consider it *first-rate*. I like the way in which you allow others to express themselves by copious quotations."—P. R. Calvert, Nashville, Tenn. "Your *Photographics* is *splendid*. Truly that book ought to please *everyone*."—E. D. Evans, Ithaca, N. Y. "It is surely a book of *Eurekas*. I have in many ways tested it, by hunting for special things in its pages, and I have never yet failed to find what I wanted—in each case I could say Eureka! I have found it."—N. C. Doddridge. "It is a complete library."—W. D. Gatchel, Cincinnati, O. Our readers will find the *press* reviews of this work on another page. They will be found instructive and helpful to those who anticipate purchasing *Photographics*. Please also read the advertisements.

A beautiful *Cottage Window* is advertised by Mr. Hiram J. Thompson, a cut of which is given in his advertisement. It is a very attractive accessory for summer use, and can be used to great advantage in many ways for both sexes and all sizes of subjects. Moreover it is very reasonable in price.

The "Lightning Shutter" advertised by Mr. W. D. Gatchel, Cincinnati, Ohio, is certainly one of the most ingenious contrivances in that line that we have seen. Its construction is made very plain by the cut and references in his advertisement. Presently we shall give it a practical trial and report more fully upon its merits. It is undoubtedly all Mr. Gatchel claims for it, as he is not given to recommending articles which are not practically valuable. It is useful for indoor or outdoor work.

If you want to make the new "*Tadema*" picture—examples of which will be given in our next issue—buy Robinson's *Pictorial Effect* and Wilson's *Photographics*, and *read up* on art principles and their application to photography.

Our advertisements this month are particularly worthy of perusal. Please read them carefully.

Died, in New Haven, Connecticut, William Bowles, aged 74; a blessed fellow; patient, charitably-disposed, honest. I write this because he was indeed good; because he *has* helped out photographic science; because, when he trundled the vertical lathe to grind out the curves calculated by his "master" and friend, W. J. M. **Blake** (whom he loved dearly, most tenderly—better than many a father loves his son), he did it for the benefit of every one of us. The advancement of photography was ever uppermost in his mind; a silent worker for a common good, who deserves to be remembered.—A. M. **DeSilva.**

The suit long pending, at New Orleans, between Messrs. **Theodore Lillienthal** and W. W. **Washburne**, has been decided in favor of the former. This has no bearing upon the validity of the **Lambert** patents relating to the carbon process, but was merely a private contest, interesting only to the parties named.

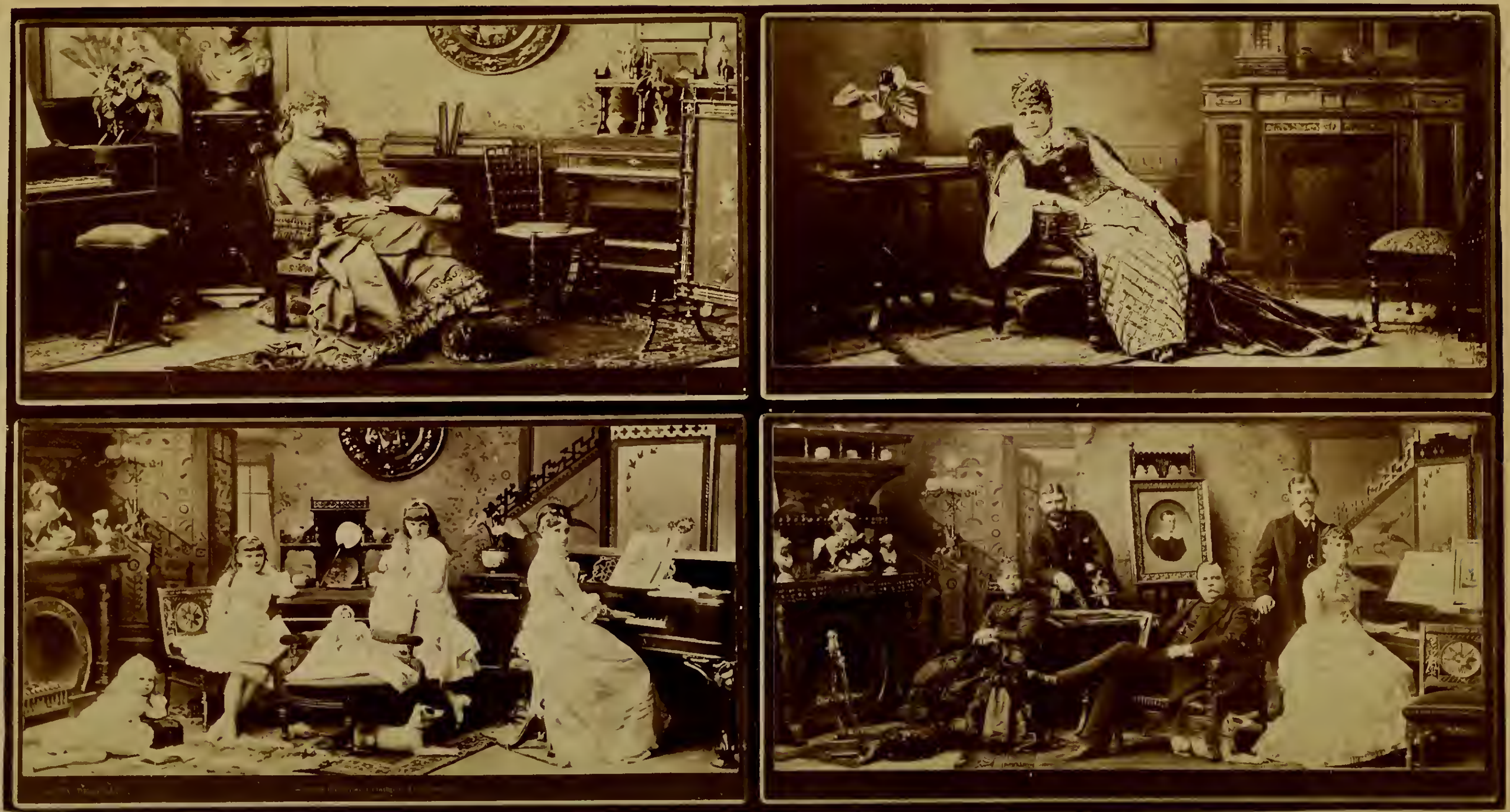
A Splendid Suggestion.—The excellent remarks of a good earnest friend, which follow, came too late for insertion, on page 251, but will do just as much good here.

"It should be the aim of every photographer to make our next meeting as pleasant, as well as profitable, as possible, and in view of this, permit me to make a proposition to the members, who contemplate going, through your valuable journal. There are thousands of fine instruments lying idle on the shelves of our photographers, we know. One person, for instance, has a fine copying lens, but at present no use for it, the other has a large portrait lens, but don't use it perhaps more than twice a year, and so forth. Now what I mean to propose is to have our brethren to go to the little trouble of overlooking their stock of idle tubes, take the name of maker, diameter of lens, focal length, etc., etc., and bring this list along. An exchange or even sale, no doubt, could easily be effected, and all would mutually be benefited thereby. If possible, bring a sample of work along taken with each instrument. I also would like to have it understood that if any member feels dissatisfied with a trade made thus, he may have the privilege to revoke the same and return the instruments, within the next, say, four weeks after the convention, paying, of course, the cost of transportation. Hoping that this idea may find favor with the fraternity, and that many will make use of this chance and be benefited thereby, I remain,

"Yours in a hurry,
"R. **Benecke,**
"St. Louis."

The Platinotype Process.—Messrs. **Willis & Clements**, finding it necessary to devote the whole of their time to the increased business of their manufacturing department, and to a great improvement in the process, shortly to be introduced, have decided to dispose of their printing department. They are prepared to sell their solar and electric light department, including a license, apparatus, and good will. Purchaser can occupy part of their premises, and can have the benefit of their advice at all times. A large number of their orders for solar prints come from licensees, and these steadily increase in number. All such orders will be transferred to purchaser. The improvement in the process above alluded to is in reference to contact-printing in metallic platinum on a collodion surface. Terms, etc., at 123 West 26th St., N. Y.

Items of News.—Mr. W. H. **Rau** has sent us a glowing account of a dry-plate excursion to the summit of Pike's Peak, to be printed in our next. Messrs. **Douglass, Thompson** & Co. have issued a very attractive special price list of card-stock. Mr. **Well G. Singhi**, Binghamton, N. Y., has been honored by *Harper's Young People*, which recently contained a copy of his sweet child photograph "Bashful." Mr. F. C. **Weston**, Bangor, Me., has reopened his studio, elegantly fitted up. Agate-iron ware is advanced in price, so say **Scovill Manufacturing** Co., "headquarters." Mr. F. B. **Clench**, Lockport, N. Y., has opened a school for amateur photographers; excellent idea. Mr. **Cook Ely**, Oshkosh, Wis., has our thanks for pamphlet of the Northern Wisconsin Agricultural and Mechanical Association, in which he advertises. Mr. E. **Long**, formerly of Quincy, Ills., is now with Mr. T. F. **Indermill**, St. Joseph, Mo., in charge of the stock department. Mr. H. A. **Hyatt**, 411 N. 4th St., St. Louis, Mo., sends us a very handsome catalogue of his stock, and adds a very tempting "Bargain-list," which buyers would do well to consult. Mr. **Hyatt** is doing his very best to meet the wants of his patrons, and succeeds. Mr. J. H. **Steffey**, a long time photographer at Alliance, Ohio, died in that place on June 5th, after more than one year illness. Messrs. **Lyon & Alexander**, Toronto, Canada, have favored us with a very pretty catalogue of their apparatus and stock department. We like its shape and size better than the general run of catalogues, and it is very complete. Many pictures have been received, but being crowded for space, we must lay over reviewing them until our next.



ALVA PEARSALL, BROOKLYN, N. Y.

Boston Public Library.

THE TADEMA PICTURE.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. SEPTEMBER, 1881. No. 213.

PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

SECOND ANNUAL CONVENTION HELD IN NEW YORK CITY, AUGUST 16TH, 17TH, 18TH, AND 19TH, 1881.

A first visit to the American Institute building, in New York, on Monday, August 15th, revealed at once the fact that the Local Secretary, Mr. L. W. Seavey, had not been idle in making preparation for a grand feast for the photographers who were to assemble there in Convention on the next day. It was a busy scene, as any one can readily imagine, and no effort will be made to describe it. The pictures were being placed upon uprights, and apparatus, etc., in place by various exhibitors, with all possible taste and speed.

The *novel* feature of all was a fine skylight, erected by Mr. Hayes, accoutred with the American Optical Company's Cameras and Morrison's Lenses by the Scovill Manufacturing Company; supplied with accessories by Mr. Seavey, and all in complete working trim, together with two separate dark-rooms for the development of dry-plates, and one for the wet process. This preparation pleased us more than anything we had ever seen at any Convention, and gave us the hope that things were coming around about right, and as we had worked to have them for many a year. Around and about the skylights the seats were placed.

Another encouraging feature was a bulletin-board, on which the announcement was made by Local Secretary Seavey that certain of the principal galleries in the city would be open for the pleasure of visitors at stated hours of each day of the Convention. Such generosity was doubtless largely taken advantage of, and was fully appreciated. We went away encouraged, and feeling "ready for the fray," a faithful report of which we strive to give below.

As each member paid his dues he was handed a rich, gold-faced badge, from a die engraved for the purpose by the Scovill Manufacturing Company, of New York. These badges (a cut of which we give) were the admission ticket of the holder to all the *seances* of the Association, and were generously presented by the manufacturers' agent, Mr. W. Irving Adams, and were a glad surprise to all. They were worn with a great deal of apparent pride.

It must have been a surprise to many to

see the brigade of short-hand reporters present. There were only *two*, however, from the public newspaper press, whose conductors gave very little notice to the Convention during the whole of the sessions—less than was *ever* done before—but there was the "official" reporter, employed by the Secretaries of the Association; the private reporter of the *Photographic Times and American Photographer*—issued daily during the Convention—and that prince of stenographers, Dr. Cyrus R. Morgan, of 629 Walnut Street, Philadelphia, who served as the private reporter of the *Philadelphia Photographer*, and whose report turns out to be the completest and the best, as our readers shall profitably see. Dr. Morgan reported four other (National Photographic Association) Conventions, and is without a superior.

At 11 A.M. (an hour later than announced, owing to the absence of some of the officials), the meeting of the Association was called to order by the President, Mr. John Carbutt, of Philadelphia.

The President called upon Mr. L. W. Seavey, Local Secretary, to deliver an address of welcome to the members of the Convention assembled.

Mr. Seavey came forward amidst applause, and spoke as follows: "Knights of the Silver Bath—and I suppose you will soon add to your escutcheon a new insignia, that of D. P., or Dry-Plate—in the name of the Photographers' Association of America, I welcome you to the city of New York; and I trust that this exhibition will be one of the most interesting that you have ever attended."

THE PRESIDENT.—The next order of business is calling the roll of members.

MR. G. A. DOUGLASS, Secretary.—I would state, Mr. President, that the roll of members is not complete, in consequence of members constantly coming in. There are probably seventy-five who are not on this list. I have got two lists; one is made out up to about nine o'clock this morning, having all the paid members on, and the other, having every member that has thus far put his name on the list, both last year and up to the present time. I move you, then, that the roll call be dispensed with until tomorrow morning. Agreed to.

THE PRESIDENT.—The next business in order is the reading of the minutes of the last meeting. Dispensed with.

The next business in order is the reading of the reports of standing and special committees. After some explanations, these were deferred.

The next business in order is the appointing of a committee to nominate officers for the ensuing year. It is for the Convention to state how the committee shall be appointed.

THE SECRETARY.—I move that the President appoint a committee of five to nominate officers for the ensuing year. Agreed to.

THE PRESIDENT.—I will make out the list of names and announce them shortly. The next thing in order is miscellaneous business.

THE SECRETARY.—Under the head of miscellaneous business the only item I find is a letter from W. S. Smith, of Newark, Ohio, which reads as follows:

"NEWARK, O., August 10th, 1881.

"MR. J. F. RYDER.

"SIR: I find it impossible for me to attend the meeting of the Association this year on account of the sickness of my operator, but will say my best wishes are with all who can go.

"I will suggest, for the benefit of the Association and the stay-at-home parties, that a collection of the finest pictures be selected by a committee (appointed for the purpose), and so packed ready for shipment to parties so desiring, by their paying freight and five dollars into the treasury of the Association. Said parties to repack and ship to the next party ordering, after having them in their possession ——— days. Each party to report to the Secretary when received, and in what condition. This might be tried, and, if managed right, be made to pay, so that by next year the Society would be in fine working order.

"Yours, W. F. Smith."

The Secretary.—I might say the purport of all this is, that the exhibitors of the Association shall donate to the Association what might be termed gems of the exhibition, making these the property of the Association, and placing them in the possession of the Secretary, who, being called upon by any member sending him five dollars, shall transmit these pictures to the party for a certain number of days, after which he returns them to the Secretary, who passes them on to the next party who wants to study them, and who is willing to pay five dollars for this privilege. They are to be the property of the Association.

The President.—You have heard the letter read; what shall be done with it?

The Secretary.—I move that it be referred to a committee of one, to be appointed by the President. Agreed to.

The President.—I name as the committee of one, Mr. Charles D. Mosher, of Chicago.

The Secretary.—Mr. President, I find here a memorandum that I think it would be well to recognize. The American Science Congress convened this morning at Cincinnati, Ohio. Among its members are a great many who are interested in the progress of photography, and, I presume, had not that Congress met at the same time with us, we should have seen their faces here. Among them is Professor Draper and Professor Woodward, and others. I would suggest, and offer as a motion, that the Photographers' Association of America send the Congress a proper telegram of congratulation or friendly greeting.

The President.—You have heard the motion just put by the Secretary. I would add that I think it would be very proper that this Association should recognize them, as they recognize many of the members of our profession. I have received their circular and invitation to attend their Congress, and had it not been for the fact of being in attendance on this Convention, I should probably have been with them. Agreed to.

The Secretary.—The following communication was placed in my hands, which I will now read:

"*To the Executive Committee of the Photographers' Association of America.*—Desiring to present some specimens of photographing, wherein or whereupon are shown mechanical expressions of ideas, not discoverable it is affirmed upon the originals, made in the ordinary script word, I respectfully ask that a committee be named by the chairman to examine and consider such copies as I may present, and report at a suitable time, as to whether they are worthy of special attention in committee of the whole, or whether simply a statement by the committee is sufficient.

"Very respectfully,

" Albert S. Southworth.

" Institute Rooms, Tuesday, August 16th, 1881."

E. G. Robinson.—I move that a committee of five be appointed as requested in the communication. Agreed to.

The President.—I will name the following members of the Association on that committee: Messrs. A. Hesler, of Chicago; E. F. Smith, of Boston; Mr. Sarony, Jr., of New York City; C. Gentile, of Chicago; and T. C. Roche, of New York.

The President.—There seems to be nothing further in the way of miscellaneous business, and I see by the order of business that the President is expected to address you. I have prepared a very short address, which is more in the shape of a welcome than an address:

Brother Photographers: It affords me one of the greatest pleasures of my life to meet so large a gathering of representatives of the photographic art, demonstrating in the most positive manner the interest you all take in the art, when at so great a personal sacrifice, as many of you must make, you attend a meeting at this season of the year. We are now well on in the second decade in the age of an organization for the advancement of photography having a national character. Looking over this assembly, I recognize with pleasure many faces present at the first meeting of the old National Photographic Association, since which, it may be said with truth, a new generation of photographers has sprung up, imbued with an art-feeling that was signally absent in many of the followers of Daguerre and Talbot in the years gone by; but yet, happy are we to say, there are with us to-day some of the veterans in the art, who are as young in their feelings and as thirsty after knowledge as the youngest one here, who, by their works and actions, may, with feelings of pride, look upon themselves as the pillars upon which previous Conventions have been supported, and the present grand Convention now being inaugurated testifies how well their labors are appreciated.

The truism, "knowledge is power," is as applicable in our profession as any other, and by these gatherings, where so much of mutual and brotherly feelings prevail, the interchange of ideas so freely made cannot help but result in benefiting us all. The programme laid down for the present Convention is the fullest and richest ever placed before any photographic body, and we now invite you to fully participate.

The address of the President was received with great applause.

THE PRESIDENT.—I will appoint the following as the committee to nominate officers for the Association for the ensuing year: A. Bogardus of New York, Chairman; D. A. Clifford, of St. Johnsbury, Vt.; J. H. Reed, of Clinton, Iowa; W. W. Washburn, of New Orleans, La.; and William A. Armstrong, of Wilwaukee, Wis.

THE SECRETARY.—Mr. President, as the legislative business of the session has got along so far, and there does not seem to be anything else to bring up in the way of business, and as there seems to be so much noise in the hall, I move an early adjournment, to meet this afternoon at 2 o'clock. The following programme has been laid out: An essay on practical art, by Mr. A. Hesler, of Chicago, on "Photography under the Skylight," and then practical demonstrations with the skylight by members of the Association. Then following that there will be an essay or address on retouching, by Mr. Barthold Meyer, of Chicago, which will take up the afternoon. The business of to-morrow will be determined in the executive session this afternoon, and will be announced on the bulletin-board.

Adjourned.

AFTERNOON SESSION.

THE PRESIDENT.—The Association will please come to order. Mr. Hesler not being at the moment present, I suppose that it will be the better plan for the Association to go on with whatever may be proposed.

MR. CADWALADER.—Mr. President, in view of the alarming news that we have from Washington, it seems to me that this Convention might very properly send some message of sympathy to the family of the President. I therefore offer a resolution as an expression of the sense of this Convention.

Resolved, That the photographers of America, now in Convention, composed of representatives from all the States of the Union, and from the Dominion of Canada, are deeply imbued with the calamity which has filled the civilized world with more than painful forebodings. That they do now tender to the family of the President of the United States their heartfelt sympathy, and their earnest hope for the speedy recovery and restoration to health of the afflicted President.

I move that the resolution be embodied in a telegram and sent by the Convention, with the signature of the President of the Association, to the family of the President, at Washington. Adopted.

THE PRESIDENT.—Mr. Hesler is now present, and will address you.

MR. HESLER, of Chicago.—There has been no preparation made at all for this thing, and, while that is going on, I will say a word or two

ON LINES AND POSING.

I hold that there is no individual in whom there are not some lines of beauty, I don't care how difficult they are. There is nobody that has a nose set square on their face, or that has both eyes alike, or both sides of the face alike. There are no two things in nature alike, and there is always a choice under such a state of facts to make the best photograph. You will find that a lady has certain lines that can be brought out in a photograph. You may also take a picture of a man, and you will say that is a nice-looking man—what fine lines. See him again, and you will wonder where they came from, for you will say, "He is the ugliest kind of a man." I have brought from Chicago three or four transparencies; I thought perhaps they would give us a chance to make a lantern exhibition, showing the lines of the face. I have not got them here. As a rule, you will find in a man's face the best lines obtained will be from the right side of the face, and of a lady from the left. That rule does not always apply. You will see the eyes of men turn this way, and of the ladies the other way. In making a portrait, of course you want to represent the intellectual as strongly as possible, and the animal as little as possible. In order to do that you want the broad-side face. When a face comes in, you look at it, to see which side is to be turned. You will find the cheekbone very finely formed in one, and the other ill-formed; one will give you a nice curved line, and the other will not. Having ascertained that, you want to get your subject into the best possible humor, either by telling a story or doing anything you can conjure up. I have found with children one of the best things to have is some ridiculous automatic toy. The figure of a shoemaker drawing his thread, or of a woodsawyer at work will do. You will say this is for babies to look at. Well, such babies as you. For babies you must be your own automatic toy, and attract their attention. You see this man's face is a pretty good-looking face [calling a man up for a figure.] [To the audience.] Which side would you select as the best? The light from the left side is the best. Now, this gentleman is rather short, and you would want to make it fuller. If you want to get the figure pretty small, put it down here pretty well, and turning the figure in this way, [illustrating,] you will get the effect that you desire. Then as to the head. You see you have here nearly the whole side of the face in a strong light. I cannot illustrate this as well as I desire, or as well as I could if there were only one or two persons; it is impossible to do it well in this place. We have here a bad reflected light. It is a bad plan to use reflected light from the opposite side. You will notice, any of you near enough to see, that it takes off half of his eye—makes him look "wall-eyed." I am making this explanation to those who know more about it than I do. There are lots of pictures which have no such blemishes. Many of them never have them. But you want a direct light always on the face, and if the brow is set in deep, you must get this up further so that the light will come in under the brow. I use in my lighting a mirror. This light coming down low makes bad shadows; it has a tendency to spring right up. The light should be as high as a man's head, so that the light will fall at an angle of 30 or 45 degrees. If I take this light from under here, [indicating] I throw out all the shadows; I make the hands look much smaller than I should if the light came in here, [indicating.] I make the nose look longer with a head-screen, or with anything else you choose, with the head thrown a little forward. You should always interest the subject in conversation with yourself while you are making the exposure. In making what is called the Rembrandt lighting, (of course you all know what that is,) you turn the subject partly to the right, so that you get the effect of the broad shadows. Most everybody who has attempted to make those use a reflector, or a light coming there, [indicating.] When it strikes the sitter in the eye, it makes him look as if he were blind, because the light is below; the light below that line shuts off that and you get rid of that defect. There you get the effect of the light in a different position, [indicating.] Now you get the light on the eye very much smaller, and it don't make the eye blind; you get the effect under the lid of the eye—the light should always come under the lid and at the side of the eye. I myself do not favor, excepting in very rare cases, what is known as the Rembrandt lighting. The broad light with a shadow gives a much better portrait. A sitter placed here—if it is desirable to have a negative made here, it can be done. Somebody is now preparing a plate, I understand, which we can use where a person is stout. Take, for instance, the stout figure of a gentleman or a lady, of course a gentleman puts on clothes, but where the figure is large and stout, it should be placed as much as possible in profile; you will find you will get better lines of the body and a better outline of the bust, without the effect of turning the body in front. Now on the model there, the light from the side is altogether too strong for a good portrait; the shadows are a little too strong. The subject should be set a little further back in order to get the high-light on the eye. Now we have still a full high-light on the eye, but there is a white reflection coming from this direction over the face, which will spoil the picture. That would not be tolerated in a gallery; there we have all this light absorbed so as to have only that required. Suppose our subject is a baby. In photographing children, I have always found it a good plan to have some candy; this should always be kept in the dark-room; it can be used for the purpose of gaining the confidence of the child. It should be your object to get the child into good humor, and there is no better way than this—to reach his good humor through his mouth; very many times I have found this to be the case. Almost invariably when a child is brought in, that child has with it an aunt or a grandmother, or a mother, and they will pull and haul on the child and talk to it and tell it that it must sit still and mind what the man is going to do, and the child makes up its mind that it won't be a picture, and then gets up and runs away. The photographer has to use his best wit and judgment to overcome this antipathy of the child. The only way to do it is to interest them in their childish plays, get the confidence of the children by entering into their feelings; if you can interest them and get their confidence, then you can do what you wish. The best way to do this is through the mouth, and if they have got into a cross mood by their parents, for that give them a little cream-candy. Always have a supply of it in your dark-room; that is one of the easiest ways to get their confidence, and when you have got their confidence, you can get any sort of picture you like from them. One thing more in regard to the light—the amount of light. The great trouble with most of us is too much light. A piece of light four feet square will illuminate a square figure-head and bust, perhaps, or the whole figure. Run a strip down and illuminate the whole figure. If we had some opaque screens we could show off the result to be obtained from four feet of square light. It will light the head better, give you a better effect, better intensity than this whole light open, or ten times as much. If I had four or five screens here to screen off this subject, it would answer the purpose. There is no necessity for a very large amount of light in a skylight-room; all we want is enough to take the subject. You must have enough light to illuminate the shadows, or the shadows will be a bad mass of black; and it is just as important in a portrait or picture of any kind to have light in your shadows as it is in high-lights—it is the great beauty of all pictures. So it is in photographs. I have seen stunning effects from white light, with perfectly flat shadows in some way; not so many of them as there used to be. You want modelling of the high-light as well as of shadow, and at the same time get as strong a contrast as possible—an extreme high-light—as light as you can have it; your detail must be all brought out if you wish to produce a perfect picture. If you don't do that, you don't get the effect of the light and strong contrast in your figure. The figure will stand out much stronger, with just enough to light it; to do this you must have screens not away from it, but around it.

[At this point a dry-plate was brought in and placed in the camera, and a negative made.]

Q. What lens?

A. Full-length Morrison.

Q. What is the size of the tube?

A. It is a 4 x 4 Morrison lens; what is called the whole-figure lens, No. 2, middle stop, three seconds.

Q. Give us the diameter in inches; we do not know anything about the number.

A. The diameter of the diaphragm is two inches.

Q. Whose plate?

A. I don't know what the name is—Fuller plate.

Q. What is the position of the sitter under the light for a Rembrandt lighting—back or directly under the light—illustrated?

A. That would make a very strong effect but a very ugly picture. The sitter is a very good-looking man, and we want to make a good picture of him. As you look at the sitter now, this cheek almost forms an oval, and this side would give the face the sort of look that we would call askew, hence it is necessary to turn your subject [illustrating]. I should set him over down here, in this way.

Q. Show the effect with a mirror on the other side.

A. I don't know how you would get at it.

A MEMBER.—Stand him on his head.

ANOTHER MEMBER.—Take another subject.

MR. CADWALADER. — Make a lighting as well as you can with a Rembrandt effect.

A. That would give the entire face in shadow, the light striking very lightly on this cheek. That would give a good, fair Rembrandt lighting.

Q. You can change the head.

MR. CADWALADER.—An opaque screen between the side light and the sitter, five feet high, would improve the lighting of the eye, I think.

MR. HESLER.—If you could stop off here, you could explain the effect of the light in this way. By placing the camera where I am now, you will have a very strong effect of the Rembrandt lighting. Of course, those who are sitting there get the broad effect of the light, but don't get the effect from the other side of the face. [An exposure was then made, which was said to be a failure from not having time enough.] Now, this model—we don't have such good models generally. The man who does the posing don't need much skill or credit, because he knows how to assume a position.

Q. How many seconds?

A. Ten, I suppose; he timed it. If there are any other questions you desire to ask, I shall be happy to answer them. A lady, I believe, is to be used as a model.

Mr. Dumble, of Rochester, was then called upon to give an illustration of the skylight, but not appearing, Mr. Hesler continued.

I don't see that anybody else is occupying the floor, so I will say a word or two on the great troubles, or some of the great troubles, and one of our great troubles is that of resitting. Mrs. Jones comes in, and you will make one or two nice negatives of her, and think that you have done something very nice, and she takes home the proof and shows it to her friends, and Mrs. Skewbob says, "What did you have that horrible dress on for? Why did you not put on your green silk? You must go and set again." So the photographer, being a clever fellow, will set you as often as you please, and so the lady comes in with a new dress every day, and in that way will go through her wardrobe. And for an excuse they will find all sorts of fault with the position and the light.

At this point Mr. Dumble, of Rochester, was introduced.

Mr. Dumble.—I don't know of anything that will give me greater pleasure than to do something that might be of some benefit to some one of the Association in the building to-day, but I have nothing prepared just now. I will to-morrow afternoon have screens prepared to give you some few ideas. If you will excuse me now, I will give way to some older member of the profession who may come upon the platform.

Mr. Hesler was then called upon to continue his remarks.

Mr. Hesler.—To make a long story short in reference to resittings, I would merely relate the rules that I have in force in my own gallery. I have on all my receipts, printed across the receipt,—and I think that the plan is adopted by a good many others,—that sittings not the fault of the artist, or any cause not the fault of the artist, will be made cheerfully. That as many resittings will be made as they choose to pay for. A lady comes in, for instance, with a child, and wants its picture in one dress and then in another dress. You say certainly you will take as many sittings as the party wishes to pay for. You will go through the entire wardrobe, but they must all be paid for. We must be paid for our time and our material. Sometimes they will come in and say that you have agreed to make a picture in three positions. I say I have agreed to make you as good a picture as I know how to make; if I see fit to make two positions, I will do so, but I did not agree to do that for the price of one picture. If you want two negatives, made very good from two positions, I will make you two, but I will charge you for them. But whenever you come in with a picture that you know is good in every respect, position, lighting, chemical effect, all good, and you want it changed, then the sitter must pay for the change. For instance, a woman will come to you to have her picture taken with her hair hair-dressed, and, as to the hair-dresser, I will guarantee that there is not one in twenty that has any idea of the lines of beauty; they will dress every woman's hair according to the prevailing fashion or style. If it is the style to have it up so, in a great bologna sausage, they will do that; if it is the fashion to puff the hair out and make a wide face, they will do that. And every face must be treated in that way. Not long since a lady came in to see me with her hair dressed in that way, making a long face, with her hair dressed up high, making the face longer than a horse's head. The picture was a good one, but she came the next day and wanted it done over. "Certainly," I said; "but what is the matter? what is the fault?" "I don't like it." "What is the matter?" "I don't like it." "Suppose you tell me what the trouble is with it, and I can change it. I want to know what change I can make? If it is not a fault of mine, I will do it very cheerfully." "Well, I don't like the hair." I said to her I knew that before I made the picture, but it was not my business to tell you. If you had asked me, I would have told you what I thought. But if I had told you myself what I thought, you might have called me impertinent. And if I had told her, she would have done so. I said certainly I will tell you; to-day your hair is dressed entirely different, it is much more becoming; still the hair is too high for your head. It was like a big bologna sausage. Take that down and make your face a little broader, and you will have a picture which your friends will admire, and that without reference to Mrs. Skewbob. That is the way you must treat your hair. You must dress your hair in a way that is most becoming. Then it will give a most becoming look to your face, and that, too, without regarding the way in which anybody else dresses their hair. I am merely relating some of my experience. You have all had your experience in this line. While we are here, we should strive to get at some uniformity in regard to resittings. I think the fraternity have allowed themselves to be abused most horribly by making resittings indefinitely for nothing, simply because they have been afraid that their neighbors were going to do it to accommodate the people. Now there is a certain amount of courtesy, they tell you, and every person that comes into your gallery should be treated courteously. They want to employ your time for a certain number of sittings; certainly we will make them, but we must be paid for it. People have got the idea that they can sit so often for nothing, that they think that a photographer's time and chemicals are worth nothing, and they will compel you to make resittings over and over again, and expect you to do it for nothing. If the photographer puts his foot down, and gives them to understand that his time and materials all cost money and must be paid for, the practice would soon be changed. It is to the interest of photographers to give the subjects their earnest attention, and to get the best results that can be obtained. That is to his interest, and also to please every one of his patrons. They should all be made to understand this matter thoroughly; then, when you have done that, if they want anything more, make them pay for it; give them to understand that they must pay for it, and they will respect you, and respect themselves, and respect the art. If anybody else has anything to say, I would like to hear it.

Q. Suppose a party brings a child in, and orders cards and a cabinet, and pays two dollars, and then orders from the cards, say a dozen or something like that, then don't want to pay anything for the cabinet sitting. What do you do then?

A. I charge them a dollar for every additional sitting. I would charge them for the cabinet sitting if they had ordered it. If they did not order it, and if I had made it, expecting them to take it, that would be quite a different thing. But if they had ordered it, I should expect them to pay for it.

Q. If you made a sitting for their order, in the first place, presuming they would order copies, what then?

A. Then I should expect them to pay for the negative.

Q. I do not think you understand the proposition. The proposition is, if, when a party comes in and orders cabinets and also cards, and afterwards only takes one, whether the dollar on each order shall merge into one order,—whether you will allow the credit to go on one or hold the dollar on the one,—that is the question.

A. That would depend upon whether I got a good negative in both cases. If I made a good negative in both cases, I should charge for both negatives.

Q. Do you allow them to sit over again? Have they any right to do so by their order?

A. No, sir; I don't think they have, after you have gone to the expense to make the negative, unless you have failed yourself; if you have, you should lose it; if it is your fault, it should be your loss. If I do not succeed in getting what I want,—a good negative,—I do not charge. Of course it is not always my fault. We don't usually call it the fault of the subject; but if I have gone to work and made a sitting for a cabinet, and also for a card, and then have to reject either one in toto, I expect to be paid for the making of that negative.

Q. Give us something in the way of abolishing proofs.

Mr. Hesler.—I will go back a little bit on the previous question, as far back as 1860. In Chicago we used to tone the proof, and ladies would go from one gallery to another until they got a dozen pictures, or as many as they wanted, toned proofs, and then go to some other gallery and have them mounted. That came to my observation twice in my gallery. A lady came in and brought them to be mounted, and I charged her four dollars for mounting the pictures. She said, "What is that for?" I said, "You have been to twelve different galleries, and I ought to charge you twelve dollars." I said, "You have got here twelve pictures, and I will guarantee that you have not paid a cent to any of those men." She was a lady of wealth. I knew her, or I would not have talked to her in that way. She was mighty close on the dollar. "You have come here now to get those twelve pictures mounted. Now I want to find out, as far as I can, who these men are, and I will try and pay them a little something for their time out of this affair." I then called a meeting of the photographers to form an organization by which we could have some system of practice as to making people pay before the negative was made or when they made an order, and never to give them a proof until it was paid for, whatever the order was. I do not give anybody a toned proof. Mr. Carbutt will remember what a time I had talking to photographers about compelling patrons to pay in advance. It was said the people never would submit to it; but they did. When all went into it, they submitted very gracefully. We pasted up our rules in our galleries. Every picture must be paid for before the sitting is made or at the time it was ordered, and no proof given until it was paid for. And after it became generally understood, we had no trouble at all in doing it. And now of late years I don't, even if it is paid for. I don't give anybody a toned proof; I give them just an untoned proof. They merely want it to look at; they can't make any use of it. And every little while I get some of these untoned proofs brought in, the parties coming with crocodile tears, saying that that is the only picture they have, and their friend is dead; can't you make something out of it? I will pay anything for it. And I will bet you anything that that party never paid a cent for that proof of that picture.

Q. Is it necessary to let a proof go out of a gallery?

A. It is pretty hard never to let a proof go out of the gallery. Some have adopted that rule, but it is a very difficult thing to do. A lady comes in, and she wants to show it to her husband, and the husband wants to show it to his wife, wants her to be satisfied with it, with the expression. If it is untoned, they can't make very much use of that. You have got the pay for your picture; you are safe, anyhow.

Q. In your experience, the average patron, be they lady or gentleman, are they worthy of sitting without prepayment? Will they come back if you make proofs without a payment being made? Will they come back and give an order?

A. Well, I don't make any sittings without prepayment, unless it is somebody that I know positively, who are doing business with me on time, or who have monthly orders, and pay at the end of the month, when I send the bill. These kind of people I don't ask a payment from in advance, or say a word about their seeing the proof, merely remarking that you know now what my rules are, and they are generally complied with.

Mr. Havens, of Savannah, Ga.—Once I was engaged to photograph the corpse of a child, for which I charged fifteen dollars. The parties were very anxious to see the proof. I just simply made an untoned proof, and they looked at it and concluded that they did not like it; the consequence was that they took that proof to another artist, had him tone it, and give off a dozen copies of it for five dollars, and I did not get anything.

Mr. Hesler.—The fault was yours; you could have made that party pay you for your negative. It might have cost you some trouble; at the same time it was unjust to yourself, and you ought to have done it.

Q. Would you consider that party a gentleman or lady who would do that? A party who would serve a man that way, would you consider them a gentleman or lady?

A. It don't make any difference about that.

A Voice.—Call them a thief.

Mr. Hesler.—It is always understood that we issue a proof. The only reason for that is to give people an idea of the expression, and the lighting, and so on. In a corpse, in a copy, in a view, I never show a proof. The corpse is there, and I make the picture of it.

Q. Do you charge extra for taking the picture of a corpse?

A. Certainly. Always $20, when I go out.

Q. What is the charge when the corpse is brought into the gallery?

A. That is a thing that I have never had done. If the parties are poor, and cannot afford to pay for it, that is another question.

Q. Can you collect the money for photographing a corpse?

A. Certainly. You can collect any bill not less than fifty dollars, and enough to cover the expenses of the suit.

The President.—Mr. Meyer, unfortunately, is feeling very unwell, and his part on the programme will be deferred until to-morrow.

L. W. Seavey.—Mr. President and Gentlemen: A few days ago, just before our opening, I received communications from photographers suggesting that we organize a Board of Trade or Exchange, and to further that end I have assigned one of the rooms in front, where I should be very glad if you would put on the bulletin-board any wants that you may have. If you want an operator, or any special thing, if you wish to sell your gallery, if you wish to exchange your gallery for another one, if you wish to exchange lenses, backgrounds, accessories, or anything of that kind. It seems to me that there is a want, and in fact, a great need for some organization of that kind; and possibly the result will be that we shall have a permanent organization which will be called the Photographic Board of Trade.

At this point Mr. John R. Clemons, of Philadelphia, was loudly called for, and on taking the platform said: I would like first to know what you want.

Q. Tell us how to get rid of blisters.

A. That is a very easy thing; that is, if you use the right kind of paper. If you do that, you will not be bothered much with blisters. It is a well-known fact that prior to 1865 blisters were unknown; even if the paper was highly albumenized, there were no blisters, but after that date there were lots of them, some very large ones. I have seen them as large as the palm of my hand. The question then came up how to get rid of these blisters. Some recommended one thing and some another. Some would recommend running the water very slowly from the hypo, another would use salt—that seemed to hold it down, and it is good to the present day. But a good deal of the double albumenized paper that comes from the other side is worthless trash; it is a good deal like a good bit of mine heretofore—not worth much. Now, the question is, is double albumenized paper a benefit to the photographers in this country? I say, no; it has cost the photographers any amount of money. Of course, you get a splendid surface; but what is surface? You may make the best kind of a negative, and if it comes into the printer's hands, and he is a poor printer, he will make a bad print, and if he is a good printer, he will make a good print. Now, for instance, a printer will let his bath become foul. That is, he will work it a long time without any renovation, or until it becomes full of albumen. You put, after commencing with the new bath, a piece of paper in that bath with the silver solution, and that silver solution will take up a certain amount of albumen. After a while that solution will become charged with albumen; it is so much albumen and so much silver; it is the silver which takes up the albumen. Now you look at the paper to see whether it has got a nice surface, and you place it on an old foul bath, as I call it, and after it comes off you will find it has not got the surface it had before you put it on. When you come to print with it, it will look all right enough; but when you come to tone it, you will find it is a sheet-iron print. You can hardly tone that print; and when it is printed it has no surface, and the next thing is that the albumenizer is brought to account because the paper has no surface. Now, I have prints in this hall made with the single albumenized paper. I would not double albumenize paper for the best photographer in the United States. There are lots of them who want it, but I can show you prints on the single albumen paper that are equal to any to be found on your double albumenized paper. The prints were not made by me, not all of them. Now, about the blisters. I find nothing in all my experience that will beat alum. Alum is a sure thing. I was the originator of the eliminating process by alum. The thing was taken in hand here in this country by Mr. Sherman, of Milwaukee, who wrote an able article upon it, but did not succeed. There was a very able article written in the *British Journal of Photography*, and I am happy to say the author of it is within my hearing. You all know that to-day alum stands on its feet, and nothing can trip it up as an eliminator.

Q. How do you use alum? in what manner do you use it?

A. I make a saturated solution of alum (you all know what that is, I suppose), and I place the prints in that.

Q. Direct from the hypo?

A. Yes, oftentimes; but I have adopted a new plan altogether, and you shall hear it. After I have toned my prints, I wash them thoroughly, *very* thoroughly. Then I throw them into the pickle, which is nothing more than a strong solution of salt. Now if there is anything like free silver in the print, it will turn it into chloride of silver, and you all know that hypo-sulphite of soda has no effect on free nitrate of silver; it forms a yellow compound, and that is not got rid of before toning.

Q. When do you put your prints into alum?

A. I generally put them into a solution of salt again, and after I wash them off from that I put them into alum, and I leave them over fifteen minutes in a strong saturated solution of alum.

Q. Can you burnish them?

A. Yes, you can burnish them if you like. Some use soap in their lubricator; it is one of the most detestable things that can be used. Others will use soap and paraffin; but I use paraffin and gum ammoniacum, and lately I have adopted balsam of fir. It makes a good lubricator and passes through the burnisher without heat; but, of course, it don't give the surface it would if it had the heat. What is my process? It is this: I take this paraffin and cut it up with benzine. Add about twenty grains of paraffin to twelve ounces of benzine to make a good saturated solution. It makes no odds whether you burnish the prints at once or not, you can leave them a week if you want to. I have done it, anyhow.

Q. Suppose they are spotted out with India-ink?

A. If you have got prints spotted out with India-ink and you want to preserve the color, the best plan is to preserve these spots by the use of a little egg. It is my custom to mix up a little white of an egg, and with it touch the spots; then put on a little alcohol, and it will coagulate the egg, and won't move afterwards. The solution answers very well, and now you have an opportunity to go home and try it, and come back again at the next Convention and report or read the news in the *Philadelphia Photographer*.

Mr. J. T. Taylor.—Before Mr. Clemons sits down, it will conduce to the better understanding of the subject of albumenized paper if he will tell us what he means by "double albumenized paper." His idea appears to differ from that which I have always understood to be the correct meaning of the term. If I may be allowed to say, double albumenized paper consists in this, and I now give you the results of the first conception of the thing. A sheet of plain paper is coated with plain, unsalted albumen, which, after being dry, is coagulated by the application of steam or other means. The paper thus surfaced with this substratum is coated with albumen containing the proper quantities of the chloride of sodium or of ammonium. That is "double albumenized." The second coating would not permeate the pores of the paper, because the first coating, as it were, had been received and retained, and that I think, with all due deference to our esteemed friend, is double albumenized paper; it has a high gloss; it is called double albumenized paper, but it is merely thickly albumenized paper.

Mr. Clemons. — Double albumenized paper, at the present day, if it is left on the edge only, is not fit for any photographer's use. If I commence with a new solution of albumen, of course it stands at only twenty-two, and when highly albumenized, with a heavy thickness of albumen, it stands at thirty-two and thirty-four. That will vary according to the paper we get. Some have an idea that they must have double albumenized paper; the difference is in the manner in which it is prepared. Now as to the time of silvering paper, when the silver solution is strong, coagulation is so much quicker that the silver does not penetrate, then the silvering must be continued longer. A very good plan is to have the sheet laid level on the silver solution. If it takes half an hour for some paper, the silver remains here very much [illustrating] and gets curled up, and when you make it straight in one part it is crooked in another. I have had that trouble in albumenizing half a ream of paper. It is difficult to keep it from curling out of the dish.

Q. How do you get rid of that difficulty?

How do you prevent the paper from rolling on the back?

A. When albumenizing, we have strips about that length, which are applied to the sides of the paper in that way, [illustrating]. That is the only way to prevent it. Have a little narrow strip of wood; this may be used when you are silvering. You can all understand the mode of its application.

Mr. Hesler.—Now the blister question has come up, you will excuse me and I will say a word. As long ago as 1860, before albumen paper came into the market generally, I used to make my own. I found that paper allowed to get very dry when handled, and passed through solutions at different temperatures, it would blister anyhow. But I found a practical remedy for it. When the paper was albumenized before it was placed in the albumen, it was kept moist, and then albumenized. Albumen paper treated in that way thoroughly, dried rapidly, rarely ever blistered under almost any treatment. But if you want to keep the paper, such as is in the market, from blistering, you must keep it moist, or in a rather moist place. Then do not dry it too dry. Before printing, let it be dry enough to handle only. Then all the solutions the paper goes through should be of as nearly as possible a uniform temperature. See to that, and you will have no blisters. I do not care whether you use alum or salt, or anything else. If the paper is inclined to blister from unequal temperatures, pass the paper through a weak solution of alcohol, one part of alcohol to one partof water, and you will have no large blisters. It will blister up in small blisters. The reason I attribute for this blistering is the constant contraction or sudden contraction of the albumen and expansion of the albumen, and of the paper in varying temperatures. It produces this result. That seems to me to be the cause, and I suppose it is; but there is something else, what it is I don't know, and it comes up between the albumen and the paper. The paper must be dry when placed on the albumen, and the albumen dried thoroughly; to thoroughly permeate it when it comes in contact with different temperatures, it forms a gas of some kind which causes the paper to blister.

Q. I should like to ask you a question, if I am allowed, and that is this, Can you silver a piece of paper on a fifty-grain bath in less time than on a sixty-grain bath? Can you silver, say, properly, with a forty-grain bath in less time than with a seventy-grain bath?

A. That depends upon the temperature of the paper and the silver solution, and also the condition of the paper, whether it is very limpid or not. The strength of the silvering solution must be regulated, as you all know, according to the negative. If you have a very intense negative, you must use a very weak solution of silver; if you have a very weak negative, in order to get a good print you must have your silver solution very strong.

By the Secretary.—Are there any others present who want to talk about this matter of blisters? if not, Mr. Cramer, of St. Louis, will give you a few remarks on dry-plates.

Mr. Cramer arose and said: Ladies and Gentlemen, although I am not in the habit of speaking before a large audience, I will do the best I can. I will say first, if there is anything you want to know about the practical workings of the different dry-plate processes, I am at your service, and shall be glad to answer your questions. We have had a great meeting here in this metropolis, and I hope you have all been benefited by it. We are in the midst of all the improvements of the age—telegraphs, telephones, elevated railroads—and that gives us the thought that we must keep up with the progress of the times. I think that the dry-plate process is one of great importance in our branch of business. Last year, when you assembled in Chicago, the fraternity at large did not know much about dry-plates, and they would not pay much attention to the subject. Now, I think that every photographer of any standing has already introduced them into his gallery. The moment I saw the first dry-plate, I found that it was a great improvement upon the old process, and although my first attempts were great failures, I stuck to it, and am satisfied with the result of my experience. We have dry-plates now in such a condition that we are making as fine negatives with them as with any wet-plates. I would like to show you how the developing is done. We have developing rooms here, but they are so small that they will permit only one or two persons to be present. Dry-plates are very sensitive to light, and you have to be very careful to exclude all the white light from your dark-room and from your camera. I, myself, have been deceived by that. Once I had several of my plates come out foggy. I thought it was on account of the condition of the plate. I examined my lens-tube, and I found that the part where the tube fits into the other admitted light, which was enough to fog the negative. Once I made an exposure with a large camera on some children. I covered the lens in the usual manner with the cloth, and went backward and forward a couple of times, to change the position of the sitter, and when I took my negative it was foggy. When I looked through the camera, I saw that the apertures in the cloth were sufficient to admit light enough to affect the plate. You want some shutter in the camera which works with a lever, or some other contrivance, so that you can open and shut the camera quickly and perfectly. Now, if the negative is exposed to the light, of course it will require always a little practice to find out the correct time. As a general rule, the rapid plates work in from six to ten times quicker than wet-plates; but it is always good to make an experiment on a plate. Make a trial exposure and a sample development, and after you have developed, you will find out which was the correct exposure. After your plate is exposed lay it in the dish giving an alkaline development. Now, you take from one bottle, which contains three grains of pyrogallic acid to the ounce of water; measure out in your graduate a quantity sufficient to cover the plate well; for instance, an 8 x 10 plate takes two ounces of each. Fill your graduate up to two ounces, and then add your other solution, which contains bromide of ammonium and aqua ammonia, equal parts; then pour that in; after shaking the bottle up well, pour it over the plate without stopping. Small plates do not need to be moistened with water first, but with large ones it is best to put them under the tap and rinse them with cold water, so that they will take the developer all evenly. If there should be an air-bubble, all that you have do is to rub it off with your finger. The picture will make its appearance in twenty seconds; it will develop slowly. If the time was right, all the lights and shadows will come out simultaneously, that is, in proper proportion. If it was undertimed, of course the shadows will not appear sufficiently, the high-lights alone will come, and the picture will be too strong. For such a case of undertiming, there is, in my opinion, no remedy, but it seldom happens that you undertime a plate on account of the plates working so rapidly. Now, if a plate is overtimed, you can easily help that. You have a little drop-bottle filled with bromide of ammonium, in which is fitted a glass tube through which runs a goose-quill, fitted through the cork, and you sprinkle a few drops of bromide of ammonium in the dish, and that will check the development and tend to produce much greater intensity, so you will get nice negatives from the overtimed plate.

Q. Is this done before the development is concluded?

A. Yes, sir. As soon as you notice the plate is overtimed, you sprinkle on a few drops of the bromide of ammonium solution. That will make the picture stronger and more intense. Now I generally look at the negatives a couple of times. This can be done, provided the window is arranged so as to admit light enough. After the development has gone far enough, the plate is taken out of the developing dish and washed under the tap. Then you place it in the solution of alum, which has the effect of hardening the gelatin, because it renders the gelatin more insoluble. After it has been in the alum solution some time, you put it in the hypo and fix it. Until it is fixed, the plate ought not to be exposed to the white light. Now plates that are thoroughly prepared and properly exposed, should need no intensifying. They should be so that they do not need any intensifying and no reducing in intensity. There are means for intensifying and for reducing the intensity which are given in the ordinary formulæ, and which are generally used in practice. The plates have to be washed very carefully. Now the reason why you develop in a dish is because the plate would not take the developer when you pour it over; it would run in streaks, whereas, with a dish, you have perfect control of the matter of floating the developer evenly. Now gelatin is known to retain the chemicals a good deal better than the collodion film, therefore the gelatin plates require a good deal of washing to eliminate the hypo. It is a good plan to arrange a box, and you must be very careful in summer that all the solutions are as cold as possible. Now in our climate, in St. Louis, where the temperature is from 106 to 108 degrees, for several days, in the shade, it is absolutely necessary to have the developer in ice water, and to have the fixing bath and alum bath cool, and even the water where you wash the pictures, otherwise the film would be dissolved. The temperature of our water itself is high enough to dissolve the gelatin.

Q. Describe the result of attempting to develop when the temperature is too high.

A. The warm weather will either cause the plates to frill or the gelatin films will be dissolved. Frilling makes its appearance on the edge of the glass. A film rises up, and all at once the loosening of it will proceed from the edges towards the centre. Then the film will slip up. The dissolving of the gelatin is different, and in that case you know the water is too warm, and when it runs on it dissolves the gelatin in the place where the water runs on.

The advantages of the gelatin plate are now sufficiently understood, so it does not need any further explanation. We have sent such plates to New Orleans, and the photographer there took the pictures of them and returned them to us at St. Louis, and we developed nice good negatives from those plates. I am speaking of the plates that were returned to us. You know that parties have travelled around the world and taken pictures in all countries, and developed the plates when they came home. I understand that some of our friends who came from Chicago, have taken pictures on their way to this place, from the train, and I have seen some of the negatives, which were perfectly good. All this is of great importance, as you all know. The great rapidity of it is, in my eyes, still more important. If you have to take children, or even old people, it has to be done quickly. You can take them, of course, better with these dry-plates if the light is dull, or in the winter days, when the days are short; you can get many a picture with a dry-plate that you could not get with a wet-plate.

Q. How about the oxalate of potassium?

A. The iron developer I have not explained yet, the other was the alkaline.

Q. Which is the best?

A. I consider one as good as the other. The iron development is a little more simple, because you need not measure the solution every time you mix the developer. It will keep a whole day, and it will remain in a good condition.

Q. How long?

A. For one day. If an iron solution is prepared, you should prepare two solutions—a solution of oxalate of potassium and a solution of sulphate of iron. Both solutions must be saturated, that is, there must be as much of the chemical in the water as the water when warm will take up. If there is a surplus, it is very much better. It will all settle on the bottom. Do not use it before the solutions are clear.

Q. Do you warm the water?

A. I put the oxalate of potassium in the evaporating dish and warm the water until it is dissolved, then let it cool. Do not use it until it is cool. It must be perfectly clear. Now before mixing the developer you have to use four parts of the oxalate of potassium solution in one part of the iron solution, which makes it clear like that, a good sherry wine color. That will remain in good condition a whole day. You don't need to measure any more, it is ready for use. Now, after the developer has been used to develop the plate, pour this in another bottle which is used for the purpose, for saving the developer. To develop the next plate, you will find the old developer which you use on your work will develop more slowly, will produce more intensity, more shadows. If you use the old developer you will find that your shadows don't come out sufficiently, then use the new developer; when it comes to the short exposures use your fresh solution. The fresh iron developer has a tendency to produce a flat picture for the time, if there is a good deal of time on it; but by mixing, or by developing partly, with fresh solution and partly with the old solution, as the case may be, you can correct the mistakes in time. You can produce pictures from overtimed as well as from undertimed negatives. Now it is a good way to watch the plates. This I have seen done in several galleries. It is done by means of a box with grooves on the side. The plates are placed in at an angle. In this way. They do not touch the bottom. They are placed in this way so that no dirt in the water can adhere to the film. The water comes in underneath and overflows the box. In that way you can wash several dozen at a time with the same amount of water that you could wash two or three plates. Now, the plates will never bear heating; you must let them dry spontaneously. (In my gallery we never show proofs.) Then you take it out and let it dry, and the next morning it is ready for printing. It will not do to hurry the plates; let them dry by themselves. If you are not sure that it is of the right intensity, make a proof before it is varnished; if you find it is too strong you can reduce it, if it is too weak you can intensify it. Under all conditions you ought to be able to tell the condition of the developer, and the print ought to be just as good as from the best wet-plate.

Q. Can the pyro-developer produce more than one negative?

A. No.

Q. How long is the time?

A. With the pyro-developer it is three seconds.

Q. In examining the process of development, do you hold the plate up and look through it, or do you look at it in the dish?

A. I develop in the dish, and take it out once or twice and hold it to the light for a moment, and see how it is for intensity.

Q. Does over-development intensify it?

A. It makes the picture stronger all over.

Q. The same as the wet process?

A. Yes.

Adjourned till Wednesday morning, at 10 A.M.

Second Day. Wednesday, August 17th, 1881, 10 A.M.

Convention called to order by the President.

The Secretary called the roll of members partially, when on motion it was dispensed with.

On motion, the reading of the minutes of the last meeting was dispensed with.

The President.—The reports of standing and special committees are now in order. I believe the Committee on Dry-plates has a supplementary report. Mr. Schleier, of Nashville, will now read the report.

To the President, Officers, and
Members of the P. A. of A.

When this Committee was appointed, the gelatin dry-plate had barely left the cradle of infancy on this continent, and while some members at our first meeting in Chicago exhibited an interest in this new departure, the enthusiasm for this great advance in negative making would certainly have been greater if the experiments at that meeting had been more successful. But we live in a progressive age! It is but a few months since the report of this Committee was published, and yet we venture to make the assertion that the greater portion of exhibits in this Convention will be work from gelatin dry-plates. And still, with the exception of a few, we ask, Who would remove his silver bath from his dark-room at present? This is not in keeping with our assertion just made, and yet we ask this question, notwithstanding.

All the evidence before you shows that the process is not difficult, nor will any one contend, who has given it a fair trial, that he could not produce as good a negative as with his old process.

Well, then, what is the obstacle?

We will tell you. It is the extra and enormous expense. With the wet process the negative is the smallest item; but with the dry-plate it is otherwise; and if you would like to please yourself and your customer by a few extra postures, etc., you must get reasonably good prices for your work.

We ask the old veterans of the beautiful daguerrotype, Why were we so willing to embrace the abomination of the collodion positive, so-called, ambrotype, melainotype, sphereotype, and with a score of other aliases, and abandon the better?

Let us be truthful, and acknowledge that it was for its cheapness; and yet you will agree that photography, at its present stage, is not so profitable by far as then.

In connection with the subject of expense I wish to quote here the eminent Dr. Julius Schnaus, who says:

"But let us suppose for a moment that the gelatin process had been discovered before the collodion, and the photographer forced to buy the prepared plates at high prices, or laboriously prepare the emulsion, and coat and dry them himself, with many failures and drawbacks. Suddenly, the collodion process is given to the world, and the different sized plates can be not only rapidly coated and made ready for use in the simplest and easiest manner, but the exposures made instantaneous at will; and, best of all, development is quick and sure, and the negative shows the greatest brilliancy and purity. Would not the happy inventor get out his patent, and the buyers of the wonderful preparation be counted by thousands?"

In our former report we believe we have complied with the wishes of the fraternity in testing the utility of this new process, whether practical or not; and while we are not sanguine enough to think that we have exhausted the subject at the time, to the entire satisfaction of all, yet we must ask this body to consider the early stage this new process was in, allowing for the inexperience of your Committee, and also the uncertainty by the manufacturer of their production.

We do claim, however, that by our zeal in the subject, and by our timely report in its favor, we have given an impulse in favor of the gelatin dry-plate, and thereby have assisted in more speedily developing this great improvement in our art.

Your Committee submits this annual report without giving any further detail in regard to experiments; knowing the great success the gelatin dry-plate has attained, and also that it is so fully discussed by all the leading journals and by the most able scientists of the day, we feel that the subject receives full attention.

Before concluding our report, we cannot refrain from expressing our belief that, notwithstanding the success of this new process, it seems that we have barely arrived at the beginning of the end. A new light is dawning. We think that ere another year has passed the expensive glass plate, as a medium for receiving the first impression in the camera, will be replaced by a much cheaper substance, such as paper or other flexible agent, and only then, when the photographer will not be forced to consider the expense of a gelatin dry-plate to gratify his ambition and artistic taste, can we expect the general use of the dry process. Respectively submitted,

T. M. SCHLEIER, *Chairman.*
E. KLAUBER,
R. BENECKE.

NASHVILLE, TENN., August 1st, 1881.

MR. SINGHI.—I move you that the report be accepted and placed on file. Agreed to.

THE PRESIDENT.—The next committee is the Committee on the Progress of Photography. The committee are ready to report.

THE SECRETARY.—I have the report from Mr. Bachrach; it is very voluminous, and I would move you that it be referred for publication. Agreed to.

REPORT OF THE COMMITTEE ON THE PROGRESS OF PHOTOGRAPHY.

To the President and Members
of the P. A. of A.

Having been informed of the probable absence of the senior members of the committee, and that the report of the same would probably devolve upon the writer, any shortcomings therein it is hoped may be overlooked, owing to the shortness of the time and the inability to confer with the other members before the meeting of the Convention. The writer therefore regrets that this can only be considered as the report of a single individual, and will only report upon such matters as have come under his own notice, hoping that some of the other members may make a more complete report.

Foremost, demanding the attention of practical photographers, comes the subject of gelatin bromide of silver negatives in its relation to practical professional work.

In the opinion of the writer, the introduction of the ferrous-oxalate developer rescued this method of making negatives from the danger of being to a large extent abandoned by the professional photographers, and, from all present indications, it promises fair to displace the collodion wet-plate process to a large extent, particularly in the larger size plates; and were it not for the, as yet, high price of these plates, even the smaller work would be largely done by this method. In the hands of the writer (who has thus far only used the "Keystone" plates of Mr. Carbutt), the results with the alkaline pyro-developer were not such as to cause him to use it, except in cases where wet-plates were at a decided disadvantage, on account, mainly, of the great tendency to fog and flatness of result, as well as uncertainty in manipulation; while as soon as the ferrous-oxalate developer was used the difficulties appeared to vanish and the results were comparatively certain. Latterly, however, in the case of short exposures, the alkaline development has been used with greater success by increasing the quantities both of the bromide and the ammonia, by which negatives of the requisite brilliancy were more easily obtained. Negatives developed with the ferrous-oxalate developer are equal in quality in almost every respect to wet-plate negatives. The greatest advantage noticeable in hot weather being the non-liability to frill and blister, owing to the powerful astringent used in the preparation of the developer, sulphate of iron, which the writer has found even better than alum as a hardener and preventive of frilling; it is a question with him whether it is not also fully equal as an eliminator of hyposulphite of soda, the chemical action involved being very similar to that of alum in that connection.

Should the method of using the developer, as published by Mr. O'Neill (of which Mr. Morgan is said to be the originator), be found practical, of which there seems to be no reason to doubt, it would greatly simplify the whole method in its application to studio practice. No details have, however, been given as to the exact method pursued, whether it is necessary to first wet the plate so as to repel the kerosene on the top of the solution, and whether the sulphate of iron should be added after the kerosene oil has been introduced, in order to prevent even the commencement of the oxidizing influence which supervenes on the introduction of the iron salt. It is hoped that these details will be furnished to the Convention.

In connection with the method of the elimination of hyposulphite of soda with alum, the writer regrets to see a disposition to take the credit from the one who first proposed the use of alum for this purpose. In 1876 the writer was shown samples of prints, alum-eliminated, made three years before by Mr. John R. Clemons, and still retained by him, the whites of which were very clear, and which had lost no vigor. A careful inquiry has failed to find any publication to invalidate this claim; and though others are deserving of credit for applying this method to gelatin negatives, it is but an act of justice to give the proper credit to an old and conscientious laborer in our profession, even if the discovery on his part was not the result of an exact technical knowledge of the principles of chemistry, but of practical experiments, which have often given us valuable results that might have lain dormant in hands more cautious, the usual attribute of a thorough technical knowledge of chemistry. Time will be required to determine the exact value of this discovery as regards the permanence of prints treated this way, and what part is played in the matter by the elimination of the sulphur compounds, and what by the hardening of the surface on which the prints are made, and what alterations take place in the compound of gold and silver which forms the finished print into a more stable combination, and one more closely allied to the actual metallic state which would be more capable of resisting destructive action.

In regard to the action of sulphur compounds, at least upon a negative made in the ordinary way, any soluble sulphide applied to it forms a more stable compound, and one better capable of resisting atmospheric action than before such application. The action of the atmosphere upon a well washed negative, unvarnished, is to gradually darken the surface, forming the sulphide of silver, at which state the action ceases, even when left exposed for years. The action of the same agents (sulphide of potassium, etc.,) upon a print appears to have no other effect than a darkening of the color.

On this subject of permanence of prints, especially as connected with large work, as a basis for the artist to color or retouch, the most important improvement of late years is the method known as the Platinotype Process, the invention of W. Willis, Jr., and for which the profession is under great obligations, not only for its constantly increasing value, but for the modesty of the inventor in presenting his claims, and for the readiness with which he gives the advantage thereof to the craft, without any attempt at extortion or extravagant misrepresentations through quack advertisements or unscrupulous agents, as in the case of other methods of late years, to the loss and injury of those who were deceived by them, and which always inures to the injury of honest and meritorious inventors by a lack of confidence in all.

After using this method for over two years in his own solar-printing department, the writer can conscientiously say that the prints have stood the most destructive tests, and in fact cannot be destroyed without also destroying the surface on which they are made. That such tests are conclusive cannot be doubted, as the atmosphere does not contain such powerful elements of destruction as strong chemical reagents. The absolute confidence a photographer, or an artist, can feel in having his work hung on a wall, knowing that it will maintain its strength for all time, with no elements of doubt in the matter, gives a value to such work not attainable heretofore. While for small work on thin paper a well-treated silver print has all the qualities of tone and permanence requisite in the present condition of our art, large prints on heavy drawing-paper have never been reliable, owing to the difficulty of eliminating all the hyposulphite of soda from such material. Silver prints on painters' canvas are still worse in this respect. Until this invention, nothing had been capable of filling this want, the carbon process not being generally practicable, particularly for very large solar prints, 30, 40, or 50 inches in length.

The platinotype process is also very simple and easily worked, and is not much more expensive than the old method. This will again throw a large amount of work into the hands of photographers which has gradually been diverted into the hands of artists who used only tracings from photographs, the reputation of the latter having been seriously impaired with the public on account of their uncertainty.

It would scarcely be just to dismiss this subject without reminding the fraternity of the great aid that the solar camera has given to our art, without which, in fact, a large proportion of our most important work could not have been undertaken by photographers. It is gratifying to note that it is an American invention, having first been adapted to photographic uses by Prof. D. A. Woodward, of Baltimore. The late improvements in the reflecting cameras by the inventor, making the body of the instrument a metal cylinder, giving it compactness and safety, leave nothing to be desired in this direction. This form of the solar camera, in view of the platinotype process and the aid which is available of the electric light, has practically superseded the cumbersome direct-printing cameras, which are impracticable for use in the more sensitive printing processes.

In the photo-mechanical printing methods a steady improvement in results has been obtained in the past few years, though nothing really new in principle has been made use of since the processes of Albert, Husnik, Liesegang, and others have been published. This branch of photography is really not a part of our profession which has any practical value for the mass of photographers, being really of benefit only in connection with publishing on a large scale, as carried on by the Heliotype Company of Boston, and similar establishments.

The same remarks will apply to the photo-relief processes for the typographic press. In this branch the advances have been made mainly in overcoming practical difficulties in the details of the manipulations, until now it is as certain of results as any other branch of photo processes. An enormous amount of work is being done by this method, the *Patent-Office Gazette* being wholly published by it, showing the value it has for publishers, besides an enormous amount of reproductions from foreign works for American reprints, especially in maps and illustrations. Some of the original works from pen drawings rival the finest wood engravings. The largest business in this branch in the country is done by the Moss Photo-Engraving Company of New York, next to whom stand the Levytype Company of Philadelphia, a younger concern, of whose process the writer is one of the inventors. The method generally in use, and yielding so far the best results, is known as the "swelling method" on gelatin, in contradistinction to the etching processes, which have not so far proved practical. In none of these various methods is success possible except by the most thorough experience and undivided attention, practical difficulties besetting the novice at every step. The utmost persistence is necessary to success. Practically, they have no interest for studio art photographers.

The results obtained by Mons. Petit, of France, and Mr. Ives, of this country, in their application of this process in obtaining typographic plates with half-tones direct from negatives, give hope that this will also finally become a practical success, and when that is accomplished the application of photography to publishing purposes will be such as will astonish even the most sanguine in our art.

Photo-lithography, being older than any of these as a practical success, scarcely attracts any attention in our literature; yet its scope has been greatly enlarged, though not to the extent of the other branches mentioned, its greatest advantage being the production of map work, and in this, from its nature, it must always have the advantage over the other methods.

The writer begs to be excused from reporting on the *art* progress of photography, as it would only have the weight of an individual opinion, and there are other members of the Committee more competent for the performance of this duty, which would require more time than is at the writer's command, as a number of authorities recognized by the profession at large would have to be consulted, in order to make a report of any value.

For the same reasons, any report upon the progress of photographic optics or apparatus must be declined by him, other than that as a source of rejoicing that the extra sensitiveness of gelatin plates will bring into use longer focus lenses in proportion to their apertures than have been used of late years, as great illumination need not now be almost the sole requisite as heretofore. The greater freedom from distortion produced by longer focus lenses in portraiture is too evident to need discussion.

Respectfully submitted for the Committee,
D. Bachrach, Jr.

The Secretary.—The next report, Mr. President, is the report on life insurance. Mr. Copelin, of Chicago, is the Chairman.

Mr. Copelin then read his report as follows :-

On Life Insurance.

Photographers' Association of America.

Gentlemen: Your Committee, to whom was referred the matter of the formation of a Life Insurance Association in connection with this body, beg leave to report that in their opinion the time for the organization of such a society has not yet arrived; and while we do not consider the formation of an insurance society to be an impossibility, we think that the fact of there being so many mutual companies now in existence to which photographers have access, precludes the necessity of our taking action in the matter. All of which is respectfully submitted.

A. J. W. Copelin, *Chairman.*
E. G. Robinson,
C. D. Mosher,
T. N. Banks,
W. W. Washburn.

New York, August 17th, 1881.

Mr. Singhi.—I move that the report of the committee be accepted and the committee be discharged. Agreed to.

Mr. Robinson, of New York, now addressed the Convention on the subject of mutual life insurance, advocating the adoption of the mutual assessment plan.

The Convention was evidently not ready to consider the subject, for after Mr. Robinson had spoken some time the noise became so great he could not be heard, and concluded by saying:

"Gentlemen, I am very much obliged to you for your attention, and I am sorry if I have interfered with your regular business," and retired.

D. N. Carvalho, of New York.—I beg leave to offer the following resolution:

Whereas, the President of the United States has been stricken by the hands of an assassin, and now lies at the point of death.

Resolved, That we, the Photographers' Association of America, in Convention assembled at the American Institute, in the city of New York, express at this, our first opportunity since the unfortunate occurrence, our detestation of the cowardly and wicked act.

Resolved, That our earnest wishes are for the recovery and health of the President.

Resolved, That we express our heartfelt sympathy to Mrs. Garfield in this her hour of trouble.

Resolved, That the Secretary be directed to transmit to Mrs. Garfield a copy of these resolutions.

These resolutions were adopted by a rising vote.

The President.—Under the head of miscellaneous business there are a number of communications.

The communications were then read by the Secretary, and referred for publication.

The resolution on Mr. Southworth's application and the report of the committee were then read and accepted as follows:

Report of Committee on Mr. Southworth's Application.

Your Committee held a meeting Tuesday at 1.30 p.m., Mr. Sarony, Jr., not being present. We report that the negatives and copies presented by Mr. Southworth show for themselves that Mr. Southworth's position is correct, and that he is fully sustained in his statement, "That copies by photography may clearly show to a competent observer, *marking* delineations and written words not discoverable upon originals."

Your Committee are united in their desire that Mr. Southworth be permitted a good opportunity to present before this Association this whole matter, and also any other matters pertaining to the art of photography with which he is familiar and which interests all those practising our art.

A. Hesler, *Chairman.*
E. F. Smith,
T. C. Roche,
C. Gentile, *Secretary.*

The Secretary.—We have the following communications, which I will read:

Dear Sir: Many thanks for your kind invitation to the Congress of the Photographers' Association of America. I am sorry not to be in a condition to accept it and to shake hands with many photographer friends I am happy to have in America.

Please make my compliments to all. I wish your meeting a complete success.

Respectfully yours,
Dr. H. W. Vogel.

Berlin, July 15th, 1881.

Friend B.: Just received my *Philadelphia Photographer*, and there is a subject that I desire to call your attention to, namely, a *Matrimonial Bureau*. There is many an old bachelor and fair maiden engaged in the photo. business who would be better off if they could form a partnership.

Being an old bachelor myself, I feel the great need of such an arrangement. From your past writings, I know you approve of matrimony in the profession. Aid us if you can, and oblige, yours fraternally,

M. E. Hartman.

Bonham, Texas, August 10th, 1881.

The Secretary.—I would move that the report of the nominating committee be postponed until this afternoon, making it the first order of business. Agreed to.

Thomas Gaffield, Esq., of Boston, then read the following paper on

The Uses of Glass in Photography.

The universal use of glass in all the arts and sciences finds no exception in the interesting art of the photographer. By glass he illumines in right degree his studio and admits a few rays into his dark-room. Glass bottles contain his chemicals, and with glass dishes and retorts he carries on his nice chemical manipulations. With glass lenses and plates he pictures the landscape and portrays the face of man, and enlarges it to the size of life or reduces it to microscopic form.

Paradoxically, and yet truly, we may say, glass is of most *positive* value in the very *negatives* which it brings to his hand.

Concerning all these departments of use, many pages have been written in photographic magazines and manuals, and only a few comprehensive words need be spoken now. Asking your indulgence, if my essay is in any measure to some of you a twice-told tale, I will try to be as brief and as clear as possible.

Glass for Skylights.—For skylights you should use double thickness of good and clear sheet glass. You will make no mistake if you purchase first or second quality of English, French, or German, and where our American manufacturers do so well in improving the quality of their production as to make well annealed, flat, clear, and good colored glass, then you will be more patriotic if you patronize them. As a Massachusetts man, I am glad to say a good word for the excellent Berkshire crystal sheet glass, made of the famous white Berkshire sand. The evil of rust or stain, arising from an excess of alkali in the composition or haste in the manufacture, and the trouble of a change of color by the action of sunlight, by reason of an excess of manganese, have received so much consideration within a few years, that good glass-makers, at home and abroad, have done their best to remedy them, and produce glass of substantially good quality and permanent color.

As you may need all the light possible to obtain in a dark day, I should advise that all skylight glass should be used in its clearest condition, unobscured by grinding or enamel, which cut off about one-half of the light of the sun. But as you may need in a bright day to shut out brilliant and dazzling rays, accomplish your object entirely by screens and curtains of appropriately light or heavy character, as your location or the nature of the day may require.

Do not be misled into the use of colored glass in your skylights by any foolish, unscientific, and untruthful theories about blue, or violet, or any other kind of colored glass. The lightest blue glass, although the most actinic of all the colored glasses, will cut off more of the chemical effect of sunlight than the darkest colorless glass found in commerce, even if it be deteriorated by the action of sunlight. Therefore, I say, be independent in your studio on dark days by having all the light which the clearest colorless glass will admit, and be independent on bright days by a skilful arrangement of your screens and curtains. And keep your glass clean, as dirt may obscure it almost as much as grinding or enamelling its surface.

I might say here that in some locations, as where a studio is shut in between other buildings, ground glass may be used to advantage, perhaps, for some portion of the side lights, because, while it cuts off a considerable proportion of the light, it diffuses what is left in such an excellent manner that the room may be on the whole better lighted than by the use of unground glass. Every little point of the ground surface becomes a minute facet or lens to transmit the light into the distant portions of the room.

Glass for the Dark-Room.—The problem for the photographer here to solve is to admit light enough to enable him to perform his work comfortably, and to shut out enough to prevent the fogging of his most sensitive plates. There have been a great many experiments tried in the way of using two or three thicknesses of yellow or orange glass, or yellow, orange, or red colored paper. But red paper is too opaque, and yellow glass transmits too much of the chemical influence of sunlight. There has been a very general opinion among photographers, and it is wrongly published in some scientific books, that yellow glass cuts off all actinic influence, or more than any other color. The fact is, as proved by experiments, whose results I shall show you, that yellow transmits more chemical effect of sunlight than any other color except violet or blue. The exact actinic order is as follows: red cuts off most, orange and green come next, yellow follows fourth in the list, violet transmits more than yellow, and blue transmits the most of all.

So, if you would be safe against fogging, you must use the red or ruby glass. But it is a serious objection against it that it is too dazzling to the eyes of the operator. A very successful remedy for this was suggested to me by Mr. Augustus Marshall, of Boston, in the grinding of the colorless surface of the glass. It gives the glass the appearance of a deep orange hue, removes the dazzling effect, and, while it cuts off a portion of the light, diffuses what is left in a greater degree than the unground glass. As there are many tints of red glass, I might add that the effect of a dark tint, where you cannot readily procure it, may be produced by using two thicknesses of a lighter hue.

Glass for Negatives.—For negatives, the artist needs for good work glass of ordinary strength and thickness, and free from waves and blisters. Perfection of clearness and a perfectly level surface are only to be obtained in the finest plate glass, but as it costs four or five times as much as good sheet glass, it is but seldom used by our photographers. We know one who used it some years ago, who afterwards substituted successfully a very superior article of clear and light-colored glass, called the Berkshire crystal sheet.

The best quality of single thickness of English or Belgian sheet glass (the Belgian is called French in New York and German in Boston) is always excellent for negatives, and formerly was almost wholly used for this purpose. But we are happy to say that some American glass-makers have, of late years, greatly improved their quality in regard to color, clearness, good annealing, and consequent strength and toughness. We can cheerfully recommend Berkshire crystal sheet, the glass referred to above, and any other kind which approaches it in quality. Of course, it is easy for any manufacturer to improve or deteriorate the quality of his manufacture at any time, and our recommendation would not apply to any article which should not be kept up to the standard named. Any photographer can easily tell, after the trial of a box, whether it will be necessary for him to sacrifice his patriotic desire to patronize home manufactures and to purchase the foreign article, which is always up to the mark. If an artist desires thicker glass than single, which is from one-twelfth to one-fourteenth of an inch in thickness, he can buy what is called double-thick by paying about fifty per cent. more.

In taking what are called porcelain pictures, opal glass is used, which is made in Massachusetts and New York, and also imported from abroad.

Glass for Lenses.—Without deciding for you who is the best manufacturer of lenses, I will make a few remaks on their proper care and keeping. They should be kept clean and entirely free from dust and moisture upon their exterior surfaces and the connecting interior surfaces of the crown and flint glasses. Any neglect of this precaution will cause much delay in the taking of pictures. When not in use, they should be covered up and kept out of the sunlight, which might give them a yellow coloration, which would essentially weaken their action. In some instances where lenses seem to be affected, the change may be traced to a discoloration of the Canada balsam, or the substance by which the crown and flint glasses of the lens are cemented together. In such a case, the difficulty can be remedied by taking them apart and giving both glasses a thorough cleaning and a new transparent layer of cement.

Mirrors for the Solar Camera.—The sunlight, which is the central source of power and success in all your work, sometimes by its very power interferes with your success. The ordinary mirror, made by a coating of tinfoil and mercury, which are held together by slight affinity, is quickly disintegrated and frosted by the light and heat of the direct rays of the sun. By actual experiment made in July of the present year, on the outside of my attic window, I have found this deteriorating influence to begin on the first day of its exposure. Exposure inside of the window does not seriously affect the glass for some days.

There are several methods of making mirrors by a precipitation of metallic silver upon the surface of the glass, backed up with a coating of red or black paint or varnish, or some other protecting substance. Many of these have proved failures, the silver surface becoming quickly spotted or spoiled for reflecting purposes. But I have found some specimens which have stood several months of exposure inside of my window without any change. Outside exposure to sunlight and rain of course injures some of them in a short time. But if you can protect them from moisture, some of these silvered mirrors will stand much better than the amalgam mirrors of mercury and tinfoil. I can only say that you must make the same experiments which I have, until you find a kind which withstands best the deteriorating effect of the direct rays of sunlight. Thin mirror plates are preferable to thick ones, which sometimes give trouble by reflection from both surfaces.

Glass for Chemical Bottles and Dishes.—For keeping your very sensitive chemical preparations with certainty from any danger of change or deterioration by sunlight, bottles of a yellow glass will not suffice, but only those of black, red, or dark-green colors; the red and black, of course, being safer than the green.

For your glass dishes, be sure to procure glass well annealed and of sufficient thickness. For retorts, and indeed for all photographic glass, avoid uncertain and dangerous experiments with the so called, and falsely called, unbreakable glass. The fact that it does break, and break unexpectedly and with sad effect, is what might be predicted of an article which, though an interesting scientific curiosity, is really only an unannealed Prince Rupert's Drop on a large scale.

That I may substantiate my opinion by fact, let me read you two articles published in the journals of the last few years. The first is from the *Philadelphia Photographer* for June, 1876. Mr. Edward Stebbing writes from Paris:

"Much has been said upon the value of hardened glass for photographic and chemical purposes, but I advise my readers to be very careful in its employ, for it appears that no guarantee can be given that evaporating dishes, etc., can always resist heat. I desired to experiment, the other day, upon the value of this invention, and purchased an evaporating dish and filled it with a concentrated solution of nitrate of silver in order to procure crystals of that salt. I put it over a Bunsen burner, but took the precaution to put the whole into a large dish. Happily that I did so, for in a few minutes the bottom of the evaporating dish flew into a thousand pieces, and the liquid was projected out in a second of time. A thousand pieces is a true expression, for the bottom was honeycombed in every direction. Now, had I taken an ordinary glass dish, and it had cracked, ten to one I should not have had a loss, for the liquid would have only filtered through the crack and given warning, whereas hardened glass does not crack, but flies into small pieces without giving any previous notice."

The following is from the *American Pottery and Glassware Reporter* for June 16th, 1881:

"A serious accident has recently befallen an apothecary of Nuremberg, Mr. Weigle, who was preparing ozone, and used for this purpose a retort made of toughened glass. The latter suddenly exploded with a tremendous detonation into minute fragments, cutting an artery and several tendons in Mr. Weigle's hand, and also injuring his apprentice. It seems about time to banish toughened glass utensils from chemical or pharmaceutical laboratories."

The Comparative Power of Colored and Colorless Glass to Transmit the Chemical Influence of Sunlight.—I might close here, but as I have never before addressed a National Convention of photographers, it may interest you to hear a word of some humble experiments of mine illustrating the comparative power of colorless glass, ground glass, and differently colored glasses to transmit the actinic rays, or more properly speaking—as all rays are more or less actinic—to transmit the chemical influence of sunlight. The general results of the experiments prove

First, That the clearest specimens of colorless glass cut off an appreciable portion of the chemical influence of sunlight.

Second, That the obscuring of colorless glass by enamel or grinding of its surface cuts off a large proportion of this chemical influence.

Third, That the darkest-tinted colorless glass sold in commerce cuts off less chemical influence than the lightest tint of any colored glass.

Fourth, That colored glasses cut off the chemical influence of sunlight in the following order: Red cutting off the most, orange and green coming next, yellow following, violet transmitting more than the yellow, and blue transmitting most of all. I have already spoken of the practical application of these results in my remarks on glass for the studio and dark-room. I have brought to illustrate these results a number of photographic sheets showing the effect of sunlight on sensitive paper under colorless and ground glass, and under colored glass of different colors after exposure varying from one minute to four hours.

The Action of Sunlight on Glass.—A few words on this point and I shall close my essay. You all know and witness every day the action of sunlight in affecting your sensitive films of iodide, bromide, or chloride of silver, and other sensitive compounds. Are you not lost in wonder at the marvellous and interesting chemical changes which the light produces in gaseous and liquid matter? And may I not add still more to your wonder in showing you how this gentle and ethereal element can cause a similar change and consequent movement even among the atoms of so solid a matter as glass? For eighteen years I have watched the workings of the magic pencil of the sun in producing the following changes of color in colorless glass:

1. From white to yellowish.
2. From greenish to yellowish green.
3. From brownish yellow and greenish tints to various tints of purple.
4. From greenish white to bluish.
5. From bluish and other tints to darker tints of the same colors.

By colorless glass is intended glass like that which we see in our windows, which shows little or no color in looking through its surface; but, observed through the edges, exhibits a great variety of tints running from the almost colorless white to those of yellow, blue, and green. The really colored glasses, made so intentionally by the addition of some metallic oxide, or other coloring constituent, can only be observed through the surface, as their opacity, except in the lightest colored specimens, will not allow an observation through the edges for more than a fraction of an inch.

In colored glasses, the main colors, except violet, which is rendered a little darker by exposure, are not at all affected, but among the intermediate colors the following changes are notable:

1. From brownish tints to a flesh color.
2. From flesh color to tints of purple or violet.
3. From amber, olive, and purple to darker tints of the same colors.

Every change of color or tint involves the wonderful condition, invisible to human eyes, of a molecular or inter-molecular movement of the atoms of this solid body, and is probably attended by an interchange or redistribution of the oxygen among the constituents of the glass, and the development, in consequence of this distribution, of the special coloring power of the metallic oxide which has the greatest affinity for oxygen, or stands in the greatest proportion to the other constituents.

And so in some specimens the yellow of the iron predominates, in some the purple of the manganese, and in others the yellow first appears, and afterwards the yellowish-purple and purple fully developed.

It is interesting to witness how these results may be applied to the production of printed inscriptions and the impression of ferns and leaves upon colored and colorless glasses. It is a species of photographic work on sensitive glass instead of sensitive paper, the sun showing itself a most excellent printer and developer, and, indeed, the only true photographer in colors.

I ought to say that this defect of a great change of the colors of glass by sunlight exposure does not exist so generally as in former years. It was caused by the use of an excess of manganese to correct the greenish color occasioned by the presence of oxide of iron as an impurity in the constituents of the glass. When the glass-makers found the defect a matter of scientific observation and experiment, and their results published at home and abroad, they remedied the difficulty in a measure by using purer materials, or reducing the proportion of manganese in their "batch," or giving up its use entirely, preferring to have the glass assume its natural and more permanent color, even if it be a little greenish or bluish, rather than by "doctoring" the mixture,—to adopt the glass-makers' term for the use of manganese,—to have it light colored to-day and easily affected by the sunlight of to-morrow.

This improvement is of especial importance to photographers who, in all operations requiring short exposures and all the light possible to obtain, would avoid the use of any glass in their skylights which, after a few months or years of exposure, will be robbed of a great proportion of its power to transmit the chemical influence of sunlight by a change to a yellow or purple tint, which in time might cut off almost as much actinic effect as if it had been ground or enamelled on one of its surfaces.

I have made some photographic experiments to show this deteriorating effect, by exposing sensitive paper under glasses of the original colors, and those of the same kind changed by sunlight exposure, and witnessing the perceptibly different shades of darkening produced.

This action of sunlight must not be confounded with that called "rust" or "stain," which is occasioned in some glasses having an excess of alkali in their composition, by exposure to the atmosphere, and manifests itself in two ways; first, by a disintegration and roughening of the surface, sometimes producing all the effects of ground glass; and secondly, by an efflorescence and apparent formation of an infinitesimal coating of oxide upon the surface, on which the play of the sun's rays produces all the colors of the rainbow, as with the action of light on the infinitesimal grooves of mother-of-pearl. This is simply surface action, whereas the action of sunlight permeates the whole body of the glass wherever the rays directly strike it.

It may be interesting for you to know that all of the curious and ridiculous stories about lightning pictures and portraits on window panes are only the offspring of the imagination of people who have discovered for the first time rusty glasses in their windows. The colors are made by the rust, and the portraits are furnished by the lively imagination of the observers, who are ignorant of this defect in some of the glass of former years.

I have thus endeavored to speak briefly upon all of the points in which my subject touches your special work, and I shall be exceedingly gratified if my humble essay has given any new facts, or suggested any new ideas which may aid you in the progress and successful prosecution of your interesting art.

Mr. Gaffield illustrated his paper by many examples and experiments, and was greeted with applause many times. His capital paper was referred for publication.

Negatives were shown at this time made by the dry-plate process and by the wet-plate process, with an exposure of three and a half seconds.

Mr. Dumble, of Rochester, gave an exhibition with a lady sitter, using a *Morrison* "full-figure" lens.

The President introduced E. Y. Bell, Esq., of New York, the former attorney of the N. P. A., who spoke as follows:

Mr. President and Gentlemen: It was not my purpose in coming forward to make a speech, but merely to greet those faces among you that I knew more than ten years ago, when we met in that beautiful city of Cleveland.

It was my good fortune to be among those that made early war upon that notorious Shaw patent, which every photographer has heard of in the past, and I am glad to say that the victory was complete then—that it has been buried forever.

As a New Yorker, I am glad to see you in our city, and I wish that all of our citizens could come out to admire the beautiful product of your work displayed to-day, and to see the members of the new Photographers' Association of America. If you do as well as the old Association did, you will grow to be successful photographers. The men that I met ten years ago have got not only the shadow of maturer years, but they have got strong reputations, not only in our city and in this State, but throughout the country, as being better photographers for having been the early pioneers, and being members of the National Photographic Association that I so much delighted to meet years gone by. To you that I have known so long, and to you that are strangers as well as to the officers of this new Association, I bid you not only a hearty welcome, but a God speed in your noble work.

Adjourned.

(To be continued.)

SOCIETY GOSSIP.

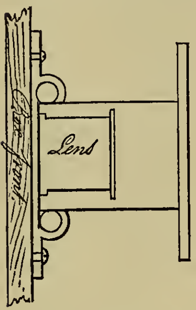
Chicago Photographic Association.—Regular meeting at Douglass, Thompson & Co.'s warehouse, 229 and 231 State Street, Wednesday evening, August 3d, 1881. A. Hall, President, in the chair. Called to order at 8 o'clock. The minutes of last meeting having been read and approved, Mr. C. E. Harvey was elected a member.

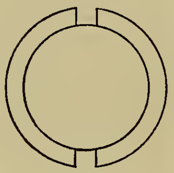
Mr. H. G. Thompson, of the committee for making arrangements connected with the New York Convention, reported having procured twenty-five badges for the members, which he exhibited to the meeting. He remarked that the subscription for this purpose was almost exhausted, while a greater number of badges would probably be required. Some discussion took place as to the disposition to be made of the badges already procured, some thinking that those who had subscribed should receive theirs at once, and, if any members wanted to decorate themselves after the existing supply was exhausted, they could do so by paying the cost of the extra ribbons. The majority, however, favored taking up at once an additional subscription sufficient to cover the whole number that would probably be needed, and, when they were obtained, all those who wished to wear this mark of distinction could be supplied by applying to Mr. Thompson, at 229 State Street. This view prevailed, and the necessary "sinews of war" were at once forthcoming.

A motion was made and carried, that when we adjourn it be to meet at the same hour and place, Friday evening, August 12th, to meet the various country and other photographers who will probably be here at that day.

Mr. Thompson informed the meeting that the club-room at the Palmer House had been engaged as headquarters for Friday and Saturday, 12th and 13th insts.

Mr. Joshua Smith exhibited a new drop-shutter, on the gravity principle, of his own invention, and which, not being patented, was free to any photographer who chose to adopt it. It consists, first, of a cylindrical tube (which, with all the rest of the apparatus, was in this instance made of sheet zinc), large enough and long enough to cover the largest lens with which it was to be used, and attached to the box by a ring passing under two brass catches, two slots being cut in the ring to let the catches pass in attaching and removing the arrangement to the box, these brass catches being the only fixtures necessary on the box front. This sketch will serve to explain the arrangement: This arrangement allows the shutter to be placed vertically, horizontally, or at any angle desired, a great convenience in case of a stereo or other box made to turn on its side for upright pictures, for instance, or in case you wish to make a long exposure,

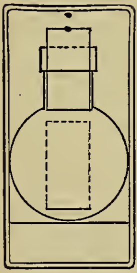




SLOT.

when the slide is placed horizontally, and opened and shut by hand.

To the front of this tube the shutter is attached. It consists of a rectangular plate of sheet zinc, with a rectangular opening in centre, and the edges turned over to form guides for another plate sliding in front of it, and which sliding-plate is provided with a similar opening in centre, covered by a second slide working stiffly, and which second slide can be set by hand to vary the length of opening in large slide, and thus the length of exposure. The large slide is held in position by a spring pin at top, which can be released by hand or through the medium of a string, in case you need to work it from a distance. Here is a sketch, front elevation. This shutter met the approval of most, if not all, of the members present, its simplicity and convenience being its chief recommendations. As to cost, Mr. Smith said the specimen exhibited cost him $1.20. He wished as much publicity as possible given to its peculiarities, in the journals and elsewhere, so as to prevent any one stealing it and taking out a patent. He did not propose to go into the manufacture of it, but it was free to any one to make who chose to do so.



Mr. Douglass exhibited Anthony's new head-rest. Its lightness, facility of adjustment in all directions, handsome appearance, and moderate price were commented on. Mr. Shaw thought it hardly possessed sufficient dead weight for use with inebriated subjects, of which he makes a specialty; he uses a lamp-post provided with a double purchase screw-jack attachment, of his own devising, which he believes better than anything he has seen.

Mr. Smith observed that head-rests being on the tapis, he would mention a little dodge of his own, which his co-members might find useful. It consists in covering the extremities of the jaws, where they touch the head of the sitter, with rubber nipples; in case of sitters inclined to be nervous, he found it a great improvement. The other day a man came to sit for his picture, suffering under a severe attack of toothache; as soon as the rubber-tipped jaws touched his head, the toothache stopped. Mr. S., however, would not recommend this treatment as a sure cure for that complaint.

Mr. Gentile showed some negatives made on gelatin plates of his own manufacture, and also prints from them. The negatives were clean, full of detail, and of good printing density. Oxalate development, no intensification. As to their rapidity, the Secretary heard no information given. But as to quality, the general opinion of those who examined them was very favorable.

Mr. Greene moved "That the committee on badges be instructed to procure a special and appropriate badge for one who has done more than any one else for the welfare of this society, the gentleman who now fills the position of Secretary to the Photographers' Association of America, and to call on the treasurer of this society for any extra funds that may be necessary for that purpose."

Seconded and carried unanimously.

The CHAIR.—Some time ago it was proposed to appoint a committee to receive the visitors who will make a temporary stay in this city on their way East; but, from all we can learn at present, it seems that no considerable number will arrive together, but they will come one or two at a time, by various roads, in a very informal manner, and it occurs to me that such a committee is hardly necessary. I will therefore simply ask the members to give as much time as possible, on the 12th and 13th insts., to meeting the visitors, showing them around, and making things as pleasant as possible for them during their brief stay here. As Mr. Thompson has informed you, the Palmer House club-room has been engaged as headquarters during those days; and I think it will be both pleasant and profitable to yourselves and your visitors to get acquainted.

You should bear in mind that the P. A. of A. is a Chicago production, and as such we ought to take a pride in it, and do all we can for its welfare. Chicago has more than her share of the important offices; the men filling these offices have been here with us for many years, and it is a duty we owe to them and to ourselves, to aid them to the utmost of our ability in making the forthcoming Convention a grand success. Whether we go to New York, or whether we remain at home, there is something or other we can nearly all of us do to this end, and I hope, gentlemen, that we shall fully sustain our record.

The weather being oppressively hot, no one felt disposed to prolong the meeting, and on motion it was adjourned to Friday, August 12th.

F. H. Davies, *Secretary*,
No. 78 Michigan Avenue.

THE TRUE INVENTOR OF PHOTO-TYPOGRAPHY.

Mr. Petit, after trying to make it appear that he obtained a French patent in August, 1878, on the process of photo-typography which I claimed, does not make a more definite statement, as I requested. In order that no false impression may exist, will you allow me to make a concise statement of the facts which I have been able to obtain only by sending to France for copies of his patent specifications?

In France, a process may be patented on the same day that it is invented. The idea must not be published before it is patented. August 13, 1879, Mr. Petit applied for his first patent on the process which I invented. His earlier patents covered another perfectly distinct process, which has scarcely any practical value.

I showed a written description of my invention to prominent professional men in Ithaca, N. Y., and obtained their signatures as witnesses to the date of my claim, exactly a year and a day before Mr. Petit patented it in France. I showed specimens to a good many persons before I came to Philadelphia, February 10, 1879.

Even Mr. Petit's original, crude, and impractical invention dates only four days previous to my own, which is practical and reliable; and he never made any progress whatever after reaching the point where I started.

I therefore claim to be the original inventor of the first reliable process of photomechanical engraving, and sole inventor of the only quick and economical process.

Since making the portrait of yourself for the June *Photographer*, I have made very decided improvements in the process. The prints now have not only the roundness and delicate half-tones of a photograph, but also the texture of a steel engraving.

Very respectfully yours,
Fred. E. Ives.

Philadelphia, August 8th, 1881.

OUR PICTURE.

For some months back, Mr. Alva Pearsall, No. 615 Fulton Avenue, Brooklyn, N. Y., and his brother, of the same city, have been exciting a great deal of interest and admiration for a new style of portrait introduced and named by them as the "Taděma Picture." Always anxious that our readers should become apprized of everything new in our art, we arranged, some time ago, with Mr. Pearsall to provide us a series of "Taděma" negatives, since which we have been printing them for "Our Picture," and are now able to bring out the results in our embellishment this month.

The genuine "Taděma" is what might be entitled a horizontal panel, and is mounted on a heavy bevelled and gilt card-board, 7½ inches by 14 inches in size. Four of these have been copied together for us by Mr. Pearsall, in order that several examples illustrative of the new style might be given. The originals were not made for our purpose, but were taken from "custom negatives." They need no apology, however, for in the arrangement of the individual figures, in the grouping, in the introduction of the accessories, in the lighting, and in the harmony of the whole, it is very evident that our artist friend has been influenced throughout by the correct principles of art, and that his works can scarcely be improved.

It will be seen at once that the "Taděma" picture is not an easy one to make. It will put those who try them upon their mettle, and draw from them the exercise of their best knowledge, if it does not compel them to sit down with *Photographics* for a few hours with Lesson A, and become thoroughly conversant with its teachings before they begin. But no one need be discouraged. The "Taděma" is only a result of the natural tendency of our art—upward. We have been growing and improving during these late years, and here is one of the evidences of it—something in advance of anything else—something to work up to—something to cheer and lead on, and not to be discouraged about. *Try* them, and don't give up until you equal the example before you.

In a letter which came with the negatives, Mr. Pearsall says: "The name, 'Taděma,' is taken from the celebrated Belgian artist Alma Taděma, who makes a specialty of painting panels in a longitudinal position, introducing figures and groups. The title, as well as the idea, originated with my brother Frank, who had it *copyrighted.* We both use it, however; but I suppose it could not be generally used on that account. This was done to prevent the 'cheap Johns' from destroying the *prestige* of the picture by having the name stuck on base imitations throughout the city.

"My system of prices for groups is, viz.: one-half the original price for each additional figure, and *no deviation.* For instance, the picture being ten dollars for a single figure, a group of five is thirty dollars; and if a child under three years is added, the additional price is the same as the original (ten dollars); one-half *in advance always.*

"The negatives were made on Messrs. Cramer & Norden's dry-plates.

"Truly yours,
"ALVA PEARSALL."

In an article in the Brooklyn *Eagle*, some time ago, we find the following comments on Mr. Pearsall's work:

"A NEW PHOTOGRAPHIC PICTURE.

"It is a remarkable fact that, with the advance of the sciences, none have been more marked in their development than that of photography. This has not been so apparent to our senses, probably for the reason that, being so practically identified with our daily life, familiarity has in a great measure stultified, or rather blunted, our perceptions in the direction of its relative progress. Following in the wake of respective scientific investigators there is always to be found a class as ever ready to make practical application of those principles evolved through the investigator's untiring labor and research; such applications being only too generally and entirely mechanical in character and rendered with no object in view other than that of immediate gain, without the slightest regard for those principles of estheticism with which the sciences are more or less abstractively imbued. And nowhere, again, has this practice been so outrageously exercised as in the profession of photography, when, since the discovery of Daguerre, the employment of method has been almost universally without those essentials which go to make up a perfect production specifically embodied in artistic culture. Photography in its relation to art should be the 'fixer' of artistic conception. This it is always ready to be; but it should have, first of all, an artist for its master. It is only of very late years that this fact has become the more apparent, and has called to its ranks men of acknowledged ability, to whose taste and artistic direction we owe most of that which is beautiful in the photography of to-day. Notably of these in the East are Kurtz and Sarony, of New York, and Mr. Alva Pearsall, of our own city. The latter has accomplished much of excellent work. But nothing yet attempted by him has reached, for quality of technicality and detail, the new picture he is now making, wherein he, while adhering to the panel shape introduced by him some two years since, changes its position from a vertical to a horizontal, and is thus enabled to distribute a number of figures throughout the length of a parallelogram with surprising force and effect. Several of these lately exhibited are distinguished by beauties that, to the photograph, seemed impossible. The groupings, while in their arrangement are most artistic, are in themselves marvels of what for lack of a better term must be called executive skill. There is no huddling together of subjects after the old stereotyped method—that the same may be brought within the field of limited or faulty optical instruments, where the resultant picture as plainly says, 'We are fixed this way to have our picture taken,' but instead, the figures are diffused as it were, and there permeates the entire picture an air of ease and tranquillity that conveys no other expression than one of perfect repose while touched with the character of sentiment. Mr. Alva Pearsall's new picture is particularly adapted to groupings. The *pose* of each figure permits the force of contrast by its independence of the other, while collectively reliant for the making of a harmonious whole, the distraction from an immediate centre in no wise interfering with the perfect definition of the outermost extremes which has heretofore been a most pronounced difficulty; among those recently examined was a family group, and presented the daughter as seated at the piano in the act of accompaniment and song, a brother beside her to turn the page, the father as central figure, having dropped the book he was perusing upon his knee, attentively listening; to the right the mother is sitting by the fireside, a little three-year old prattling at her knee, wearing in *pose* an expression, an air of lingering happiness; upon the floor two younger members engaged in childish amusements, made up a group that for eloquence of expression has never heretofore been photographically attained; while of the apartment itself, the walls run well back, the perspective perfectly defined, chairs, tables, cabinets of *bric-a-brac*, and other furnishments of a room occupying positions between, around and about the subjects proper, making the deception of a drawing-room and occupancy effectively complete, without the slightest phase of distortion, even while portions of the furniture take up positions in the foreground and in advance of the principal subjects. Much study and labor has necessarily been expended by Mr. Alva Pearsall in the accomplishment of these beautiful works. The methods employed are strikingly new, and will stimulate a renewed impetus in the art-science of photography, and arouse the dormant energies and ambitions of the craft."

The prints were made on the R. & T. Extra Brilliant Pearl Albumen Paper, manufactured for the trade by Mr. Hiram J. Thompson, the well-known dealer, No. 259 Wabash Avenue, Chicago. We found it a remarkably easy and certain paper to work, and that any desired tone could be obtained upon it. The surface, too, is brilliant, and we do not see why it is not equal to any of our best imported papers. Doubtless, an appreciative craft will think so, and reward Mr. Thompson for his pains in securing to them such an excellent article.

We now leave the "Taděma" with you to think over, and to take hold of when you are ready. Its growth into favor will be slow, as the cabinet size was, but it will grow *just the same*, and *just as much.*

A CURIOUS CONCLUSION.

THE "funny man" of the St. Louis *Practical Photographer*, who, ashamed of our craft, fires his batteries under the sobriquet of "Quidado" (Latin for father of Quids), is as sharp as a negative made by a Morrison lens next to the last stop, and as acute as an alkaline pyro developer, but he has had an awful fall from grace and made a big blunder. In commenting upon Mr. Ives' phototypograph of the editor of this magazine, which appeared in our June issue, he writes as follows:

"In the *Philadelphia Photographer* for June, there is a phototypographic engraving of the editor by a process invented by Mr. Ives, which, with the exception of some samples by Mr. Petit, of Paris, France, done last year, is the first we have seen made direct from a negative from life or nature. For this class of work on a commercial scale it quite fills the bill, being very rapid and economical. There is one drawback to it, however. The closeness of the lines, according to Mr. Ives, which produces the modelling, is fixed, whether the design or figure is large or small, at one hundred to the inch. In the case of a large figure the modelling, definition, and detail will be quite good; but in the case of a rather small figure, as in the portrait of the editor, the detail is not clear, and there is a want of definition and force in the shadows. In Mr. Petit's process his lines are adjusted to a scale to suit the scale of the work to be done, and the detail, definition, and modelling are good enough to satisfy an artistic eye the most exacting; his shadows are decisive and the impression clear and full of color, as engravers say. But in the rapidity and cheapness of the two processes, Mr. Ives has a marked advantage. His lines (vertical and horizontal, forming squares) are struck at once, whilst in the process of Mr. Petit the lines are 'plowed' out one at a time, for the French papers state that he uses a 'plowing-machine;' but his work is the more artistic. Both processes will find a large field open to them.

"Truth, the chief and most valued characteristic of photography, cannot be altogether suppressed, whatever the sophistications to which it may be submitted. There have been numerous proofs of this; and the above-mentioned photogravure of the editor of the *Philadelphia Photographer* furnished another instance of it. The editor 'chaws,' and he carries his 'quid' under the left cheek, in contra-distinction to those generally addicted to the weed, who keep it under the right cheek."

This last conclusion is entirely a wrong one. We never had a "chaw" in our mouth stronger than our native spruce-gum, and no "quid" was ever carried in *either* cheek. Moreover, the picture alluded to is *reversed.* Consequently, there never was any "quid" in our mouth, and it wasn't "under the left cheek," *either.*

"Quidado" has evidently never seen his "brother" in *propriæ personæ*, else he would have remembered over which "cheek" we part the few hairs that eighteen years at the desk have left to be phototypographed by Mr. Ives.

NOTES AND PRACTICAL SUGGESTIONS.

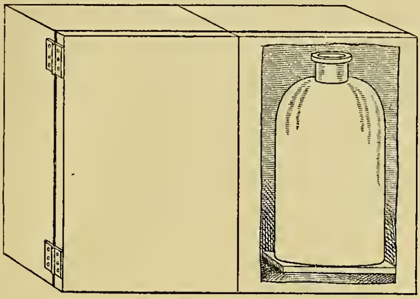
BY A. M. DE SILVA.

(Continued from page 130.)

THE report of the committee appointed by the Photographers' Association of America to investigate the different gelatin-emulsion plates has not, by any means, proved satisfactory. There has been hitherto so little dry-plate work done in this country that it is not to be wondered at that the report should fall somewhat short of the expectations of the majority. There are a thousand and one ups and downs in dry-plate work which have never been dreamt of by the wet-plate worker, and yet, when these troubles are mastered, I am sure the dry will come out favorably; but it will not be *all* gelatin. There is a mania for rapidity, but with this comes very much trouble in the exposure of the plates. Unless it is just hit upon, you can hope for anything but good results. Besides, in my experience, which has been considerable, unless you can get a picture in a fraction of a second, you will do very much better by exposing a long time. So-called instantaneous views of streets have been hitherto, as a rule, miserable things. With water you can do better, on account of the volume of light present; but where there are dark surroundings the exposure must be made sufficiently long to bring out the detail, otherwise the better-lighted parts will become filled up and lacking detail during development.

The prizes offered by the makers of particular brands of gelatin plates will, no doubt, induce many to try them who would not otherwise have done so; but I fail to see where this can prove the superiority of one maker's over those of another. Neither is the path of the exposer of commercial gelatin plates strewn with roses without thorns, as we are led to believe by the glowing advertisements. Judging by these published accounts, my experience, *under certain conditions*, has been altogether different to the promises held out in the prospectus on interior views (which at this time of year are very dark) I have made on these plates. I have found it necessary, using wide-angle lenses, to expose them quite as long as would have been required by the bath plates (wet), to produce presentable results, while plates from the same package, exposed under the skylight with not only portrait lenses, but view lenses, using stops of one-sixth, one-eighth, and one-tenth the focus, required but from one-third to one-fourth the exposure of the bath plates (wet).

A great many failures are occasioned by the miserable light of the dark-room. Any one with a little ingenuity, and at trifling cost, can fit up quite a brilliant light into the window of the chemical-room. By taking a small packing-case, cutting the bottom in half, so as to form a door to admit daylight when desired, and fitting into the other half one or more five-pound bottles filled with a saturated solution of bichromate of potash, a perfectly safe light is obtained. The cut represents the light as seen from the *inside* of the room. After the piece is sawn out, so that nearly the half of the bottle will set in it, a piece of cloth is stretched tightly over; a cut is made in it so that the bottle rests snugly into it, thus preventing the light from passing through the outer edges, the bottom being supported by a board with small strips nailed around, to cut off the light from the bottom of the bottle. The bottles should *not* be corked, a piece of glass simply laid on the top to keep out the dust. While developing gelatin plates a piece of ruby glass can be placed between the bottle and the light in a minute, the light from which is much more comfortable for the eyes than the glimmer of a little lamp, or the ruby paper through which you can see nothing. And if the window faces the sun, it will be found a very convenient warming-closet for the developer.



(To be continued.)

THE DRESDEN GALLERY PICTURES.

It will be seen by the advertisement in proper place that arrangements have been made by which our readers may obtain at a very low price some of the most exquisite art studies in existence. It is well known that the celebrated picture gallery in Dresden contains some of the most magnificent art productions in existence. As studies in composition and posing, nothing could be more advantageous for photographers than these. They are produced strictly according to the principles and rules of art, and the selections which have been made for these portfolios are of the very choicest subjects. We were at no little trouble to induce the parties who publish them to allow these selections to be made; and we hope that photographers who are really and earnestly interested in improving themselves in that direction, will patronize this enterprise, and possess themselves of these wonderful works of the old masters. The reproductions are made by means of the photolithographic (artotype) process, and many of them are hard to tell from the finest steel engravings. An examination of the list of the subjects will show that groups and single figures have been selected with the special object in view of making them suggestive and useful to the photographer in his every-day work. We are glad of the opportunity which they give photographers for study at such a small outlay of money, and, although not exactly in our line, are glad to bring them within reach, because of our earnest desire to help, in our feeble way, all we can, towards the better *art*-education of our fraternity. The Taděma picture is the coming style, but you cannot make it without the proper knowledge.

THE *Photographische Wochenblatt* reports that a Mr. Ionte, in Huttich, has recently invented a new emulsion, which is very similar to Dr. Vogel's, without containing pyroxylin, but only bromide of silver, gelatin, alcohol, and some spirit of verdigris. Some experiments made with this new emulsion showed very good results.

Editor's Table.

Pictures Received.—Mr. C. W. Motes, Atlanta, Ga., has given us a great surprise in a batch of really elegant plain photographs, of cabinet, panel, and promenade sizes. They are tastefully posed and full of all technical excellences. Mr. Motes has made great progress in his work—the natural outgrowth of attendance upon the conventions, reading, and general wide-awakeativeness. We saw him in New York, of course. Mr. E. D. Ormsby, Oakland, Cal., and Mr. E. T. Billings, Racine, Wis., each send us a single picture meriting all we have said for Mr. Motes'. Mr. John Buell, Geneseo, Ill., is a young photographer of much promise, as a batch of his work before us testifies. One or two conventions would fix *him* all right, as well as many others whom we know of and whose work we are too crowded to mention. Oh, photographers, use the opportunities close at hand and you will become *great!*

Items of News.—Mr. James Cremer, 18 S. Eighth Street, Philadelphia, publishes the best Fairmount Park stereographs. A local paper says that Mr. E. S. Wertz, of Allentown, Pa., belongs to "the class of skilful artists whose reputation is secured by life-like pictures," and it is just so. Mr. Wertz was also at the Convention and *reads*. Charles Cooper & Co., of New York, favor us with their monthly price-list of chemicals. It should always be consulted, and is sent free.

The *Photographic Times and American Photographer* was issued *daily* during the Convention in New York, giving the bulk of the proceedings and a great deal of other matter. The four numbers (extra) were ready at 9 A.M., and all these are given to every subscriber for the year 1881. The whole of the volume can be had by sending us fifty cents, if you take the *Philadelphia Photographer* also.

Photographic Mosaics (which is to be for 1882) invites all intending contributors to its pages to kindly send in their papers immediately, as the editor thereof wishes more time than he is usually given to arrange the gems into proper shape. Please write and send *now, every one of you*. Author's bound copy free.

We have received from our esteemed Paris correspondent, Mons. Leon Vidal, a series of portraits from the following leading Parisian photo-masters: Nadar, Walery, Mieczkowski, Beuqve, Van Bosch, and Liebert. These we shall arrange in a mosaic picture, and present to our student readers in a future issue of our magazine, accompanied by notes from Mons. Vidal, giving much information as to the noted artists named, Parisian prices, sizes, styles, etc., which must be very valuable, we believe.

A good chance. Read:

I have received a letter from a friend asking if, at the Photographic Convention, a photographer could be found who would like to locate in Victor, N. Y., a thriving village twenty miles east of Rochester, Auburn division of the N. Y. Central R. R. A new block might afford a good location for a skylight. It seems to me a line or two in your journal might locate some one there. Information as to population, etc., can be obtained of the postmaster, Mr. Gilbert Turner.

Very truly,

L. W. Seavey,

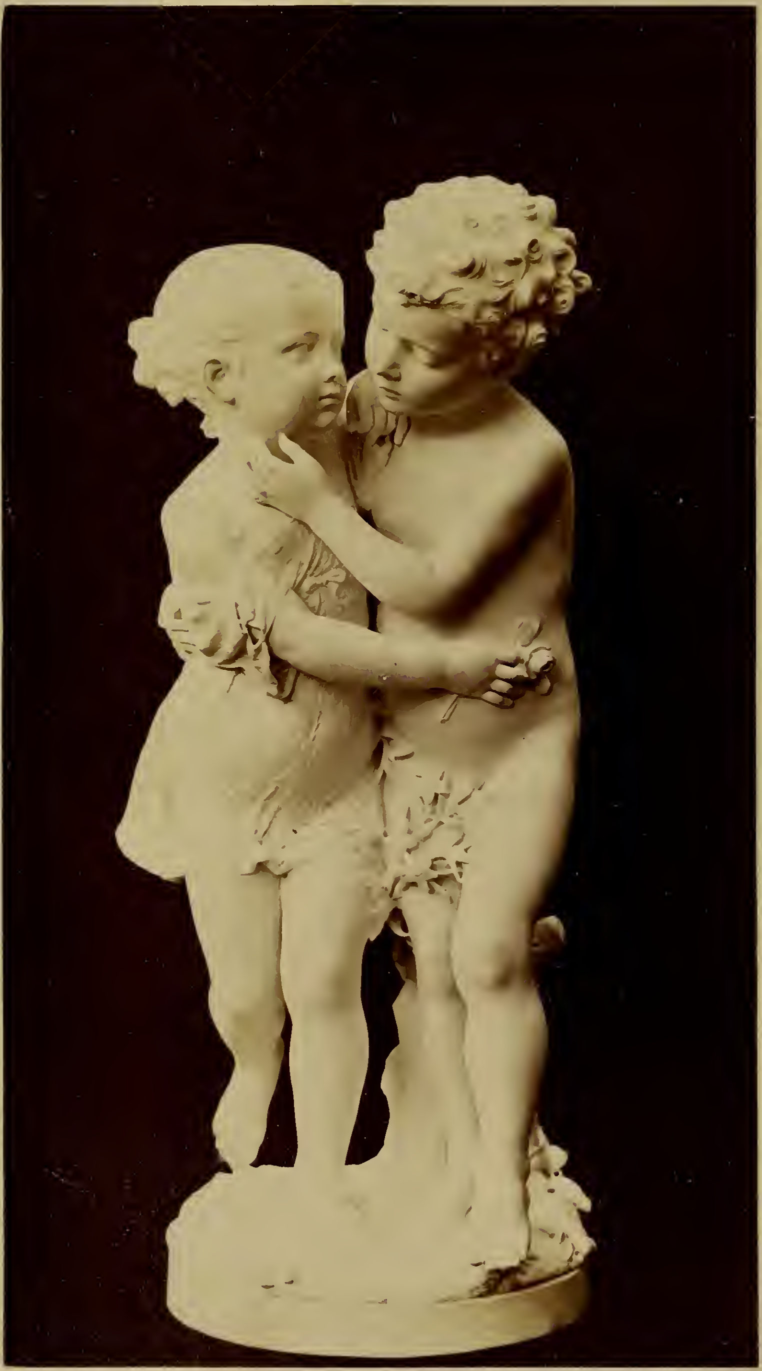
Local Secretary, P. A. of A., "as was."

The next Convention is fixed to begin the second Tuesday in August, 1882, at Indianapolis. Mr. John Cadwalader, of that city, being Secretary.

The study on our cover this month is from a very pretty cabinet vignette picture, made by Mr. C. W. Motes, Atlanta, Ga., and was reproduced by Mr. Fred. E. Ives, of this city, by his new process. By comparing this picture with the one in our June issue of the editor of this magazine, it will be readily seen that Mr. Ives has made great progress with his promising process.

Laid Over.—Owing to the crowding of our pages by the Photographers' Association of America's proceedings, we are obliged to defer the publication of our German and French letters, a very interesting Colorado letter from Mr. W. H. Rau, and many other good things.

The proceedings of the Photographers' Association of America's Convention are partly given to our readers in this issue, and will be concluded in our next, together with some press notices, reviews of the work, and a complete list of the exhibitors. The two issues will be sent to any address for $1.00.



PIETRO LAZZERINE. CARARRA, ITALY.

Boston Public Library.

BROTHERLY LOVE.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. OCTOBER, 1881. No. 214.

PHOTOGRAPHERS' ASSOCIATION OF AMERICA.

SECOND ANNUAL CONVENTION, HELD IN NEW YORK CITY, AUGUST 16TH, 17TH, 18TH, AND 19TH, 1881.

(Continued from page 281.)

WEDNESDAY, AUGUST 17TH. AFTERNOON SESSION.

The Association was called to order by the President.

Mr. Cadwalader expressed a desire that some practical demonstrations be given in the manipulation of dry-plates.

THE PRESIDENT.—As the Chairman of the Nominating Committee is not present, I will occupy your time in speaking of developing dry-plates. I am very glad that so many of you desire to know something about this new element. We are all eager to learn about it. In reading over the report last evening, I saw that a gentleman from St. Louis made a remark, if I quote him right, that the pyro-developer can be used for but a single plate. I entirely differ with him in that. It can be used for a succession of plates,—as many as six or more,—with a very little addition of the ingredients. You make the developer by the further addition of ammonia bromide or a little more of the pyro. I am speaking of the practical use of the pyro-developer. It would seem to me that if photographers could use it but once, it would entail a great waste. There is no necessity for it, if you are accustomed to and familiar with the use of the pyro; those who are, will bear me out in my statement. It will keep good several hours, especially if covered up. In reference to the ferrous-oxalate developer, several have inquired of me. I have had some slight experience with that developer, and I must say that there is a point, which seems to be a very small one, which does not seem to be understood, and which is of essential import in the use of it. It will be necessary to test the mixture with litmus-paper to see whether it is alkaline, neutral, or acid. If it is not acid, it should be made so with citric acid or oxalic acid. Unless this is done, it will develop very flatly; you will get no brilliancy. That may be the reason why many fail in using it. It is a developer that is very simply mixed, and a very useful one, and I think one, where you have an uncertain exposure, that will be used almost altogether.

MR. J. E. BEEBE.—I would like to say, in regard to the developer, that I think I can tell you how to make the oxide-developer, and you will say it is the best you know of. I have tried it. Take a two-gallon jar and put in one gallon of water, and then add the salts of tartar or carbonate of potash; stir it around until the salts of tartar are dissolved; then put in two pounds of oxalic acid and stir again, and let it settle until it has ceased effervescing. You will find that a certain portion will not dissolve; but that will make no difference. You will have a solution that will give you a satisfactory result as a developer. In fact, it is the best developer that I have ever used, giving plenty of time. Don't try to be too quick; give plenty of time, and not use very much iron. Two ounces of the solution to the drachm of iron will make a good plate that I will guarantee will give you good results, and such results as will astonish some of you.

THE PRESIDENT.—I was going to say further to you that the proportion given to you in some formulas is to use one ounce of the saturated solution of iron to four ounces of oxalate, but that is not arbitrary and could not be followed out. I have recently developed some plates with a solution of iron, one to four, with some restraining bromide in it, and the result was a great deal better than where the solution was used one to three. It is at the moment of using that observation is required to say what manner of plate is coming out, whether it requires a stronger developer or a weaker one. You will get more harmonious results by slow development and a weaker developer. The proportions that Mr. Beebe has given you leave the oxalic acid slightly in excess, with the power of neutralizing the carbonate of potash. If there are any questions the members would like to have answered, I shall be glad to answer them.

Q. I would like to ask if, in the use of the pyro-developer, it should not be filtered after using it once?

A. No, sir; it is very desirable, in the use of the pyro-developer after the first use of it, to apply the brush after it is in the tray. Have a broad camel's-hair brush about three inches in breadth, and go gently over the surface of the plate with the brush in the first application of the pyro, and also in the second and third applications, and then there will be none of those bubbles formed which give the transparent spots. On the second and third application, when there seems to be a very persistent bubble formed which does not penetrate the film so quickly, the use of the brush is almost a necessity.

The Secretary now read the report of the nominating committee, which was received.

Mr. Dumble, of Rochester, New York, now demonstrated under the skylight his method of Rembrandt lighting. He said: Many photographers, in making a Rembrandt, turn the face almost directly to the light. My experience has been that it is apt to spoil the eyes, that it deadens them and fills them full of light, and for that reason I never turn the eyes to the light directly. It also causes a harsh, flat light on one cheek while the other cheek is flooded with the light; while, if you turn it up in that way [illustrating], the eye is not filled with light, and you do not lose the outline of the face that is necessary to a perfect picture.

I use a screen at the right to reflect the light. I prefer one that is of a light gray color as being more pleasant to the eye of the sitter, and to your own eyes when working in the gallery. I use the screen for the head, and having learned to do it in making my pictures, I would be at a loss without it: I like it very much. The screens in my gallery are opaque. I have them all on strong rollers. They are about six feet and a half wide, and I have a skylight somewhat larger than that, six feet wide. I never use but a small portion of light for the head and shoulders. For a bust picture I use a little more on top.

Mr. Dumble now made a Rembrandt profile, using the head-screen to light down the front of the face and allowing the rest to be somewhat in shadow.

THE SECRETARY.—Gentlemen, a lady model is expected to sit for us, and while we are waiting for her to come, Mr. Beebe will read his essay upon "Art and Dry-Plates."

Mr. Beebe then read his essay as follows:

ART AND DRY-PLATES.

Mr. President, Ladies, and Gentlemen: Many weeks ago, when I was requested to prepare a paper for this occasion, I had not to hesitate a moment as regards a choice of subject, inasmuch as two studies have absorbed all my time, one of them for years, the other since it first took practical form and became an object of interest to the fraternity. My first and oldest love is and has been Art; my last and most troublesome mistress has been the Dry-Plate, and I will endeavor to give you, briefly, a few of the thoughts that have resulted from much thinking and not a little laborious work. Like every other photographer anxious to keep up with the onward march of the leaders in the profession, I spent all my spare time in assiduous art work; and I may say here, with all modesty, that whatever of success I may have achieved as regards the commercial side of photography has been entirely owing to the fact that I have always been a student and lover of art. As I have been questioned on the subject, I will say that, in addition to a good theoretical education in art, a large measure of the practical should be obtained by every student and beginner in the profession who hopes to rise above the most ordinary level, for it is a fact that every leading photographer of to-day is an artist in the highest sense of the word, and the subtle something that permeates all that they produce gives ample evidence of it.

I notice, therefore, with much regret, that this matter, so vital, so important, is placed by most photographers in the rear of their requirements, and that they hunger more for new processes and new methods than they do for culture and artistic education; but, as you all know, a sifting, winnowing process is going on, and there is now better work and more of it being done than ever before, and a photographer now is not so very different from his fellow-men, either in mental equipment or social position.

What is it, may I ask, that your patrons ask of you? Do they desire pleasant and artistic surroundings? do they spend time in asking for technically perfect work? do they ask for careful lighting, finishing, posing, retouching? Indeed no; they expect all that as matters of course, and sure you are to hear of every bit of slovenly work.

In the cities, at any rate, we have succeeded in educating the public up to a point that is often, to say the least, disagreeable; and for this reason, if for no other, do I desire to sound a loud note of warning to those easy-going brethren who think they have reached the end. Little do they know of the ceaseless study and toil that the ambitious ones are bestowing upon this matter of artistic education, and what a factor it is getting to be in their pecuniary success. Again I repeat, it is not the manipulatory part of our business that interests the public, only to the extent of their personal comfort and convenience, but the result *must* be satisfactory in an artistic point of view, or unpleasant comparisons and invidious distinctions are sure to result. Your customers may not always be able to explain their reasons, but you will inevitably find that the photograph they bring to you as a model for their own will have in it something that has touched their unknown sense of what is artistic and right, and that something has been the result of an art education on the part of the maker.

It is beyond all question that the leaders in photography to-day are as unapproachable in their work by the uneducated, uncultivated workmen as are their prices and reputations.

Hence I insist that the successful photographer must be within himself an artist and a business man; the old notion that the two natures cannot amalgamate must be modified, and young men entering the profesion must discover that it is not a species of refuge for men who have failed at everything else.

Let me call the attention, then, of the young men in the profession to the fact that only by earnest study of all that charming realm called "the artistic" can they hope to rise above the ordinary. Operators can always be hired; artists rarely, if ever.

This brings me easily to the second part of my paper, the relation between the artistic worker and the dry-plate.

Watching the growth of dry-plate photography with all the eagerness of one anxious to be relieved of the many worriments of the wet-plate, I was only too glad to welcome the stranger to our shores, and give him the benefit of a fair hearing, at any rate. Off and on for a long time did I test the merits of the gelatin plate, but with no success to speak of, and I always kept my collodion bottle as a sheet-anchor, but one fine morning a piece of work presented itself, that only magic or a dry-plate could do, and the dry-plate did it. From that day on I was converted, and when I became acquainted with the oxalate-developer, the little devil that lives in all silver baths saw that it was all up with him, and he left incontinently. My bath I gave to my printer, my collodion stiffened on the shelf, my fingers became white, my health improved, my customers were astonished at the results, and for that matter so was I, for queer work will a new hand make of the gelatin plate.

I had to relearn how to make a negative, but I was constantly encouraged by the fact that, in spite of all drawbacks, better results in an artistic point of view were obtained by the dry-plate than by the wet, and after many months, not of freedom from trouble nor of relief from care, I still maintain, nay, insist, that the dry-plate on many a hard-fought field has proved itself the victor.

Leaving out anything in the way of extended remarks on the advantages of the dry-plate, merely mentioning in passing those of improved health, perfect cleanliness, ease in dealing with refractory subjects, the ability to handle many sitters, by deferring, until convenient, the development, I will hasten to speak of the value, artistically, of these new aids to fine work. The first thing about the dry-plate that will prejudice the art student in its favor is the correctness with which values are given, and if the word value is not understood in its art sense by any here, I will state that it means the relative position occupied by any object in a scale of light and shade, running from the deepest shadow to the brightest light.

Art lovers, and artists the world over, place the greatest stress on this matter of values, and it is one of the chief glories and boasts of the French school of painting that this matter is with them a point of superiority.

As you well know, photography has been denied a place among the fine arts, and I can't say that I regret it, for the fine term art-science is to my mind and ear as noble a rank for a profession as any man need care to ask, and among the many reasons why we have not the privilege of calling ourselves artists is the fact that all photographic representations of color are false both in value and in kind.

That there is much truth in this charge every worker knows who has been through the endless discussion as to the best color for a dress, the way certain colors of hair would take, and many such kindred subjects Using the dry-plate, I speak from experience when I say to my customers, color of any kind, complexion of any kind, baby of any kind, cat, dog, horse, idiot, deaf mute of any kind; make not a particle of difference; bring them along, and as near as black and white can represent I will give them to you. These plates and long focus lenses give us a strong lift upward.

Let me gallop my hobby one moment more, and I am done. If you would avoid much trouble use the oxalate-developer; and if you have sinned in any way that you think beyond forgiveness, and you wish an adequate punishment; if you want for once to understand the total amount of "pure cussedness" contained in a few materials, attempt the making of a reliable dry-plate.

The bulk of all failures has been borne for you by the manufacturers, whose skill and patience have but just begun to be appreciated. As a photographer whose burden they have lightened, I thank them; and as one who has dipped somewhat into the mysteries of gelatin, and who has paid smartly for so doing, I tender to them my heartfelt sympathy.

One of Mr. Carbutt's dry-plates was then shown to the audience, with the remark of the gentleman who showed it that he thought it was better than the wet-plate. A dry-plate "quiz," impossible to report, now followed, after which Mr. Joshua Smith, of Chicago, addressed the assemblage on "dry-plate working, or the gelatino-bromide process."

MR. SMITH.—Gentlemen, I find that I have very much to say to you, but first I want you to look at this shutter. I made use of it on the train from Chicago, going at the rate of forty miles an hour. (Shutter shown.*)

Mr. Smith continued, as follows:

I have made these plates in my gallery since last January. In the preparation a plate thoroughly clean is a necessity—I use a substratum. I take sixty grains of thymol in one ounce of alcohol, with one drachm of that to the white of each egg; and I make my solution of albumen by shaking up and filtering about one to eight. Pour that on the plate while yet wet, the same as we albumenize the plates by the wet process.

I had probably better give you a description of my gelatin-room. I have a marble slab two feet wide and about eight feet long, perfectly level. On my left side as I work, about eight inches above the surface, I have it covered so that no dust can fall on the plates while they are drying; right in front of me is my levelling-stone. It is provided with three large screws for the purpose of levelling. The dark-room is a small room inside of another room. Inside of that I have an iron oven built. The entrance to the oven is from the outside, in which I have a little gas-stove, to give me the heat I require. In the centre I have a large place cut out fitted with ruby glass. To reduce the temperature of the room during hot weather, I make use of the expedient of hanging wet sheets up in my dark-room.

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* For a description of this shutter, with drawings, see "Society Gossip," page 282, of our last issue.—Ed. *P. P.*

I have a large dish, with a little spout in the bottom of it, on which I attach a rubber hose; in that dish I put pieces of crushed ice; and the object of the spout and the hose attached to the dish is to carry off all the water, because the ice will last longer when there is no water in it.

I will now give you my formula. I take three hundred grains of French coignet gelatin, and, after washing it in several changes of water, melt at one hundred degrees. First, however, I make a silver solution sixty grains strong, adding a little pinch of carbonate of soda so as to neutralize all the free acid present. This I sun until it is perfectly clear; then I take of that seven ounces, and add two hundred and seventy-five grains of bromide of ammonium, which I dissolve afterwards in the gelatin. This I wash, soak, and pour off a couple of times. After it is melted, I add two hundred and seventy-five grains of bromide of ammonium, keeping it well stirred up. To the mixing you will have to pay a great deal of care and attention. [At this point Mr. Smith drew a sketch on the blackboard of his mixing apparatus.] The slower you mix it the better, and the more sensitive the plates will be when the emulsion is formed.

This, after being mixed, I put into a large bottle and place it in water at the temperature of one hundred and twenty degrees, Fahrenheit, and the heat is kept up by means of a gas-lamp underneath. This box of water has a false bottom, with perforated holes in it about an inch above the real bottom, so that the heat from the gas below is not so concentrated, but diffused all through. I now place it right in the dark-room, and don't take it out till the next morning; keep it at that temperature all night. In the morning I take two hundred and fifty grains of Nelson's No. 1 gelatin, soak and wash it out, just the same as before, and drain it. In the meantime I have reduced the temperature down to ninety degrees. Then taking it out of the bath and letting it set, I put this into the bottle of emulsion, and I let that stand about two hours and a half, which gives you a chance to clean up your place for the day's work. When that is done I pour it out and set it in a dish surrounded with crushed ice. It settles in a very little while, and you have to be very careful that it don't freeze in the winter-time. Be very careful not to raise the temperature any higher than one hundred and twenty degrees. It can only stand so much and no more. After this emulsion is set, I take a heavy paper-knife and run it through in every direction into a linen canvas—perforated canvas—and squeeze it into a flat dish and boil it; if it is too warm, reduce it with ice to the proper temperature. I repeat that operation half a dozen times, to get rid of all the nitrate of ammonium that has been produced by the action of the bromide of ammonium and the nitrate of silver—that is a great point. The better you get rid of the nitrate of ammonium, it is affirmed, the more sensitive will be your plates. Having washed them, get a whole sheet of chamois leather as thick as possible—the thicker the better (wash it first before using it in a solution of strong carbonate of ammonia to get rid of all the oil that has been used in tanning it). Pour the emulsion upon it and drain well. Then take the bundle of chamois containing the emulsion and put it into a dish, and put it in water and let it melt. It will run right through it. There is no trouble about it, and after it is melted add two hundred grains more of Nelson's No. 1 gelatin to give the consistency that is required. Now the reason for adding these two hundred grains of gelatin last is this, I do it because I don't want to get too much water in my emulsion. When it is all melted take the same chamois leather and wash it out in warm water, and filter through that. When done filtering add to about eight ounces of the emulsion a solution of chromate of alum—sixty grains to eight ounces of water; but I use one-half of a drachm to eight ounces of the emulsion. This will make about twenty-five ounces of emulsion. If I add the whole amount of the chromate of alum to the emulsion, after I get through coating half a dozen plates I will not be able to coat any more plates, and the plates would all be pockmarked. This is caused by the hardening of the gelatin through this alum. By using a little at a time you avoid this difficulty. I don't believe in a drying-box. I have iron rods running in a box about three inches apart—two rods; they are fixed in the ordinary manner. They are round rods, one-eighth of an inch in diameter, fastened at the ends. There should be plenty of ventilation in the room to absorb all the dampness there may be in the box. I don't put very many plates in a box. The reason for that is, that the atmosphere is only capable of taking up so much moisture. The more plates you have in your box the more moisture you create, and the consequence is, if the atmosphere cannot take it up, your plates won't dry; but after the plates are dried they are put away in a box, one on top of the other, and we are ready for work.

Now I will show you another thing — the method by which I get the atmosphere into the room. There is no patent on this, either. [A diagram was then made on the board.]

When about to coat the plate, take a hog-hair brush and brush it off. Then have a small bottle of emulsion standing in warm water, at ninety degrees, close before you; use a horn spoon, containing in the neighborhood of one-half an ounce of emulsion. Now, if I want to coat a five by eight plate I take one of these spoons, dip it into my emulsion, and put it right in the centre of the plate; and being in the centre of the plate I take my finger and I work it around a while. After it is all right, I take it in my hand and manipulate it in such a manner that it will be all right, and I shove it right on to a slab alongside of me.

As to my developer (if you have distilled water it is better than any other): I take eight ounces of water and add one hundred grains of citric acid; I weigh out one ounce of bromide of ammonium, then an ounce of pyro, and I pour these eight ounces of solution into the pyro bottle and back again until the pyro is dissolved; it takes some time. You have to turn it in and out once or twice before it is dissolved. After it is dissolved I put that into my stock-bottle—this is No. 1; now take an ounce of ammonia to seven ounces of water—this is No. 2. That is all that is required. If I wish to make a very rapid exposure, I take, for instance, for an eight by ten plate, ninety minims, that is one drachm and one-half of solution of No. 2, and use about six ounces of water. I put that into my developer, and I take my plate out and work it; if it will work in ten seconds, all right. I leave it there. I take forty minims, less or more, whatever my judgment dictates; it depends upon the subject, the lighting, and the solution, and everything. No. 1, which is the pyro, I pour in my ammonia solution. Now I take my dish and pour back into my graduate the forty minims of pyro; I then pour it over the plate; the image will now make its appearance. You can develop up the image the same as you do with the collodion plate, providing you have had a very short exposure. If you have got plenty of time take half and half, mix the two together with six ounces of water, put it into the bottle, and it will come out all right. There should be a strainer for the pyro. You need not be afraid of accidents, or anything of the kind. This developer is good, and you can depend upon it. Now wash the plate, and if you want to put it into a solution of alum you can do so.

For the intensifier I use the mercury. I find it is a very good thing, providing you know how to use it. I make a solution of the iodide of potassium and a saturated solution of the bichloride of mercury, and a tolerably saturated solution of hyposulphite of soda. I take another bottle, a larger bottle, and I add to that a certain quantity, according to the amount of intensifier I want to make up—the iodide of potassium. I take my bichloride and I add until I get what I call a copious precipitate. When I have got that done, then I take my hypo solution and I put it in in small quantities at a time, and I shake it up until it is clear.

Mr. Cadwalader.—I move, Mr. President, that a vote of thanks be tendered to Mr. Joshua Smith for the very satisfactory manner in which he has given us his mode of making dry-plates.

Agreed to.

Mr. C. J. Richardson, of Wakefield, Mass., now spoke:

Mr. President and Gentlemen: I have a few words to say to you in regard to working dry-plates. I have discovered that you as well as others have been chronically dry. You ask for nothing, and want to hear nothing, but what relates to the dry-plates. Now there is one point on which I wish to speak to you, and that is the use of the light in working the dry-plates. You must use the light through ruby glass. Ruby paper does very well, but ruby glass is better. I might further tell you something about the dry-plates. I am glad that Mr. Smith has explained to you how you can make dry-plates, if you choose to do so. Let me now recommend to you for the development or working of dry-plates two thicknesses of ordinary orange post-paper, put right over the daylight or the large window, if you can get it. Should the sun shine on the window, you may need three of them, but not more. And I will guarantee that any plate can be worked well before a ruby light, can be worked there without fog, no matter how sensitive it may be. If you will try the experiment, you will find it easier for the eyes. Further, in regard to the quantity of light used—use all you can get conveniently, but do not use artificial light if you can get daylight. It is always best to be able to see well all that you do. The orange post-paper is to be had of all the large stationers and paper dealers. It is a thick-glazed, well-calendered paper. There is a difference in it; select that which is most orange—some of it verges more towards the buff.

One other point in regard to the light—don't expose your plates to any light unless you are obliged to. Use all your light for the actual working of the plates. Keep them in total darkness; then you can expose them three or four times as quickly as a wet-plate may be exposed. My advice is to use the best ruby glass, which will give you great satisfaction. It is perfectly safe. You can expose your plates indefinitely to it. I will not keep you long, because you have been kept a good while already, and must be pretty well exhausted; but there is one point in regard to the dry-plates—the retouching of dry-plates. How do you retouch them? Do you work on the varnish, or do you work on the gelatin? How do you do it? The gelatin plate is hard enough, and you can use your pencil on it. It will mostly require a little tooth; the best substance as yet is coal ashes—fine coal ashes. Coal ashes you can get fine by putting it in water and pouring off the finest part into another vessel, filling up again with water three or four times, and then drawing it off; each time it will settle a little, pour it on the filter and let it dry, the same as you used to use the cuttle-fish on the varnish. This, I think, was suggested by Mr. Foss, of Malden. He gave it to us many years ago for working on varnish.

I am often asked another question, and that is, whether you can apply heat to the varnish. I think I heard some one ask that question. They must be thoroughly dry before you use them, just as in the collodion plates. It is not necessary to heat them; but that is according to what the varnish is, or whether you should apply the varnish or not.

The Secretary.—In the afternoon, to-morrow, Mr. Gambier will occupy your time in artistic posing and lighting. We would like to have a full attendance. A motion to adjourn is in order if there is no further business.

Adjourned.

Third Day. Morning Session, August 18th, 1881.

The President.—The meeting will come to order. It is in order to receive Mr. Mosher's report, if he is prepared to make it. Mr. Mosher not being present, Mr. J. F. Ryder, of Cleveland, Ohio, will address you.

Mr. Ryder then read his address as follows:

It is well, in an assemblage of this kind, where hundreds of interested men have met to exchange kindly greeting—to be teacher and pupil to each other, to gain light from the accumulation of a ray each from a hundred or a thousand minds — that our thoughts turn in grateful remembrance to the memory of the practical discoverer, Daguerre—that we recognize in him a benefactor to the human race, in having given the means of securing and preserving the most truthful shadow image known, and in which the world finds great pleasure and satisfaction.

Every photographer should carry in his heart of hearts the image of the father, and should honor him as the *parent of his art.*

There are, no doubt, a goodly number present who practised the art as he gave it, making the image upon the polished silver surface plate. All such feel nearer to and better acquainted with him than those who have practised only the more recent methods.

Without attempting to follow the step-by-step advance from infancy to the giant proportions of to-day, we may recognize the strength and value of our art's position, and give attention to its continued healthy growth. What we believe necessary to that end, is a watchful care of its morals as a condition essential to progress.

Every man engaged in this business owes to it, to himself, and to his neighbor certain duties in contributing to its welfare and elevation by keeping it respectable.

Respectability is the corner-stone of all substantial structures of a business character, and particularly applies to ours. Its first element is knowledge. To possess a good practical knowledge of one's business inspires confidence in the patron, who likes to be handled and managed intelligently. Most people are quick to detect an indecision or hesitation on the part of the operator that would imply a lack of skill. "Knowledge is power," and makes a man master of the situation, even in a photographic operating-room.

The means of acquiring this valuable aid is within easy reach. Every intelligent and progressive photographer has his library, he reads the journals, takes a little study of art principles even outside his wants for daily practice. Most valuable of all, he studies the human face and learns much of character; he adapts what he finds of interest to the camera, and adds to his knowledge of individual character, which stands him in daily stead in managing the model to intelligent purpose.

If any man within reach of my voice fails to notice the lighting and shading of the faces he looks into, day by day, wherever seen, and note mentally its peculiarities, fails to take the teachings freely given by accident or natural chance, if he does not sometimes carry in his mind the remembrance of a fine head, well poised and lighted, which may have been caught at a glimpse, or viewed at leisure, if he does not carry that image for weeks and months, sometimes for years, I must tell that man he is in the wrong business.

The study of human faces becomes a habit and a pleasure to the student in portraiture, and the measure of his success depends much upon this self-imposed training. The eye becomes quick to see and recognize the correct and the beautiful; the camera, under intelligent guidance, is quick to secure it.

"Love thy neighbor as thyself" is a pretty strong way to put it among photographers, and there is a chance of its being evaded. What the revision may have done with that command I have not learned. My interpretation of it as adapted to our profession is, that if we desire the respect of good people, if we would command uniform good prices for our work, if we prefer accumulating a little money for ourselves to spoiling the chance of our competitor acquiring any, it would be well that we have peace and good understanding with one another. If we would be good to ourselves, we must be good to our neighbors. That is a rendering that should be acceptable.

The unprofitable jealousies that mark the craft may be likened to thistles among the wheat—they rankle and destroy. The strongest condemnation I can give of the almost universal unsocial condition among photographers is that it costs too much to keep it up, and is a bad investment.

"Next to godliness is cleanliness."

If photographers would embellish their walls with a neatly-framed copy of that text, if they would read it daily, giving it the attention it deserves, and follow faithfully the golden hint, there would be thousands of men who from that commencement would improve the quality of their work, make themselves and their establishments more popular, and gain a better patronage.

A carelessly kept photograph gallery is about as uninteresting a place as a tidy person could desire to find. I have seen such places, and it would seem as though a breath of pure air would be a surprise to it. The stale odors of chemicals reinforced by a musty, dusty, indescribable smell, faded, stained, and much-worn furniture, crippled head-rests worth a cent a pound for old iron, dingy walls which suggest a possible blue or leaden tint, and a whitewash-brush years ago is about the thing. This is a fine place for a bride, with silken train and falling veil, or for *any* well-dressed lady or child!

When you see the proprietor of such an establishment, you recognize the eternal fitness of things—the natural law of harmony is declared; the man is suited to the place, and the place to the man.

I need not undertake a description of him—you have all seen him, but I think not in this place; his education is finished. That sort of fellow is too numerous, however, for the credit of photography.

A clean shirt is a voucher of respectability, and commands recognition from all well-bred people; a polished boot and a well-brushed coat is not overlooked or undervalued by the great majority. It makes a man look better in his patrons' eyes, and makes him better satisfied with himself.

I once had a customer to sit for a locket picture. He brought a hand-trunk, and bolted the door of the dressing-room, where he polished his boots, put on a clean shirt, and declared himself ready to be taken. On being told it was unnecessary to shine his boots, as only the head and shoulders would be taken, he replied that he felt more "dressed up" with them blackened, and he preferred to look and feel well when he had his picture taken. I have believed in that man since then more than I did before. A man handling sitters should cultivate a tidy and polished appearance, both in manners and dress. I have a spleen against seeing a man work among ladies, as photographer, shabbily dressed, or in his shirt-sleeves.

I object to the practice of photographers calling themselves artists with the freedom many do. I cannot think it modest. The title means a good deal more than belongs to the practice of photography. I know a few artists who are photographers, and a very few photographers who have artistic tendencies. The man who may have been driving pegs into the bottom of a boot, or collecting fares on a horse-car last year, is not competent to take the title of artist this year because he has engaged in the photograph business. As a rule, I cannot believe a justice of the peace to be a statesman.

Occasionally we see a man who looks beyond the idea of a photograph representing a dollar, or five, as the case may be. Then the work ceases to be drudgery, and a pleasurable ambition enters into it. He may really feel something like inspiration, and the result of his efforts gives him a satisfying sense of something beyond a mere likeness. That man has artistic feeling. He sees glory in the rising sun, and grandeur in his going down! Masses and waves of children's hair are a pleasure to him; the bent figure of age may describe to him a line of beauty of peculiar tenderness, while to another it seems a mere deformity. Unconscious pictures and beautiful creations live in his mind. There is a chance—almost a danger—of that photographer becoming an artist.

I must tell you how I got one of the most valuable lessons, as bearing upon our business, I ever had. It came from a man who knew nothing of the peculiar perplexities of our business, in fact knew too little of human nature to succeed in business himself; but he taught me well by *impressing upon my mind* a fact I knew as well as he did. He came into my rooms, one day, for a friendly call, and inquired how I was progressing. Although young in the mysteries of daguerrotype-making, I was doing quite well, and with natural pride told him so. He said it was easily accounted for; said I had learned the valuable fact that molasses caught more flies than vinegar, and that molasses was my best capital. He referred to my competitor up the street as "Old Vinegar," said he was driving customers away by his sour manners, and I was catching them. I was amused at this way of putting it, but I had got my lesson, and shall thank him all my life. Hundreds of times in the years after that, when solely tried by capricious and over-exacting customers, and upon the point of giving way to anger and disgust, have I recalled the lesson, and by continued patience and indulgence succeeded in pleasing, and sent them away satisfied and happy, instead of angry, and as sure workers against my business.

We all know how difficult it is to bear the caprices and whims of the unreasonable. We know what comfortable satisfaction it is to sometimes resent imposition, as we feel it to be at the moment; but in the serious and candid afterthought we must confess to ourselves it is damaging to have differences with our customers. We may wisely take to ourselves the fact that in all departments of business there is a certain amount of imposition to be recognized and carried. Retire, if necessary, to your dark-rooms, gentlemen, and commune with yourselves; smite your brow with your clinched hands, swallow the rankle if it takes two gulps, and be sure you come out smiling. If it be clearly impossible to avoid misunderstanding, bow the party out with a smile, *and put molasses in it*, let them go with the conviction at heart that they have been the aggressor. They are liable to come back wiser and more amiable.

A word about prices. Let an earnest, determined man fix a good, respectable, or even a high price upon his work; then let him show by painstaking care that he makes the work *worth the price*, and the public will soon learn to understand and appreciate him. People, many people, prefer to have the very best, and will pay the price. We see men in the learned professions, in the higher branches of art, and mechanics whose services cost high, and we see people who will have them from preference, because they have confidence in their ability, and in the belief that they are being served in the very best manner. The man not only inspires confidence in his customers, but in himself, and aims to deserve his position of a high-priced, painstaking man.

I remember seeing, in a neighboring city, a little placard in the room of the hotel at which I was stopping, which read as follows: "Randall's photographs command a higher price than any others in the city—Why?" I recognized the value of the query in the double sense that it challenged attention and sent the reader's thoughts off upon an inquiry, the answer to which was favorable to the advertiser. If the work commanded a higher price, the natural inference was that it was superior.

In another city, conspicuous for the excellence of its photographic work and the very low prices that prevail, a photographer has posted at the entrance door, "No cheap photographs taken here." Surely values determine the standard. Not only the work the man does, but the man himself is regarded in a higher sense. In elevating his art he elevates himself.

How is it with the man that starts out to scoop his neighbors by degrading his prices? I care not what may be the skill and the good intentions of the man; he may claim that five, four, or three dollars per dozen for cabinets is enough; that it gives a good profit, and he chooses to give his customers the benefit of low prices. That man will not take the pains to do good, careful work, and he will soon begin to justify himself that his work is as good as the price he gets for it. Besides degrading his own practice he is injuring an honorable calling, and stands as a reproach to it.

The man who exhibits the work of others in his show-cases, thereby allowing the public to believe it to be the product of his own skill, and deceiving people by such misrepresentations into a patronage he might not otherwise secure, does not deserve the countenance of honest men; he is obtaining money under false pretence.

The practice of copying the work of others for the purpose of putting such copies upon the market in competition with the original sittings, in a degraded form as to price and quality, may be regarded as "sharp" by the copyist, but can hardly be considered honorable by any fair-thinking man. It is possible in this city to find, within speaking distance of the establishments where the original sittings were made, copies at five cents each, while prints from the original negatives command thirty cents each. I know people, blunt of speech, who would call that sort of practice stealing.

The photographer may, in the interest of medical science, by means of his art, show representations of the human figure, or such parts of it as are of value to medicine and surgery, with propriety. He may also, with propriety, indulge the fond parent in portraying the cherub figure of the babe, but he must beware of prostituting an innocent camera and a respectable profession to the production of lewd or improper subjects. Probably the greatest blemish to our young art is in the unfair and disreputable uses it has been put to by unprincipled practitioners. I do not revert to these subjects with pleasure, but from conviction of the duty of their emphatic condemnation.

Whether on the Sabbath morning you take your prayer-book for attendance to church, or saunter towards the pleasant stream, be sure the key of the gallery-door is in your own pocket, and the doors locked against the boys and their friends, for little do you know what may be doing there to the injury of its good name.

Prolonged applause followed the delivery of Mr. Ryder's address.

The President.—I will now introduce to you Mr. S. V. Allen, of Freeport, Ill., who will tell you something about making crooked faces straight.

Mr. Allen then read his address, as follows:

Making Crooked Faces Straight.

Mr. President: If there be among those present any who from the title of my address, as it has been announced, expect from me an elaborate essay on drawing, or an exhaustive lecture on the correction of the lines of the face, or even a full exposition of the difficulties that beset us in any one department of face-making, they will probably be disappointed. Such instruction belongs to the pages of our magazines, and would obviously be out of place here. I will rather ask you at the outset the privilege of being unmethodical, and giving you, as they have occurred to myself, a few practical suggestions on the modifying of certain unpleasant lines of the face, and then, if there be present some—as there doubtless will—who "knew it all before," I will beg leave to say that my remarks are addressed rather to the uninformed than to those who, like many present, have honestly for themselves earned world-wide reputations. And so, considering my distinguished friends to be rather spectators than audience proper, I will feel less diffidence in speaking in their presence.

But our customer is waiting, and the young man reports that she has very irregular features. What is to be done? She is magnificently dressed. The milliner and the dressmaker have done their best. She is considered handsome—is unquestionably stylish. Why, sir, the concentrated skill of a score of cunning fingers has been employed to make her presence what it is! The whole habitable globe has been ransacked to prepare her to have her picture made. The oriole has been slaughtered in the mid-air for his wing, the ostrich on the desert for his plumes, and the mighty monster of the deep for his whalebone, and yet she was not ready! But at last she *was* ready! At last the stupendous task of preparing a young lady to have her picture made was fully accomplished. At last the hum of the stitcher and the plying of incessant needles ceased. The ostrich and the sable, the silk-worm, the whale, and the reed-bird alike, were undisturbed in their several homes. At last this young lady, supposed to be formed in the image of her Maker, stood forth in all the aristocratic humility of good taste, in all the complicated simplicity of true modern refinement, stood forth, the pride, the glory, and the wonder of an advanced civilization; and yet she has a crooked face! The keen eye of the artist sees on the instant what her nearest friends have never observed. It is your business to depict that face so that the truth shall force itself through all your work, and yet so that the unpleasant fact shall be subordinate to and concealed by the agreeable truth. In your finished portrait she must appear to her friends as *they* see her and not as *you* see her. You must have the mastermind that can subordinate one truth to another one. Are you equal to the task?

Those present who are close observers will, perhaps, have discovered that irregularly-formed faces may be divided into two great classes—the one uniform in their irregularity, the other not uniform in their irregularity. To illustrate: The uniformly-irregular face is such that, if taking a front view, right lines be drawn through the joining of the lips, the centre of the eyes, the points of the cheek-bones, and the corresponding points of the jaws, they will not form parallel lines, but rather lines that will find a point of common intersection a few feet from the face. This form of irregularity it is not my purpose to speak of at present. It usually arises from a partial rheumatic paralysis, in which one side of the face has grown larger than the other.

Some time since, as I was idly rambling through the pages of our photographic magazines, I came upon an inquiry for a method of printing photographs on india-rubber. It has often since puzzled me to imagine what the young man wanted to know *that* for. I think now I have a pretty clear idea of what he had in his mind. I may be in error, but I feel pretty well convinced that it was a mark of devotion to his mother-in-law. Do I hear some one ask how that can be? Why, you see, he had the old lady's picture, and on a critical examination of the face he found he did not like it quite so well as he fancied he did when he was indulging in love's young dream. In fact, he had progressed so far in love's young dream that he had got around to the nightmare of his connubial felicity, and had, of course, made the discovery that his mother-in-law's face was crooked. And so, with the exalted devotion to his mother-in-law which characterizes all truly good young men, he wanted to put her picture on india-rubber and pull it back once more into the expression he always persists in thinking it had when first he saw his Mary Ann.

But, seriously, while I must admit the exalted motives that set the young man's inventive genius ablaze, I must contend that this would only secure the end in view under certain conditions. And those conditions, leaving all jesting behind us, are such as only occur where the irregularity of the features results from the partial paralysis referred to.

This is, however, a form of irregularity of features frequently met with, and, curiously enough, such *faces* are nearly always handsome in other respects.

I would not like to commit myself rashly to any unproved theory, but I am convinced that this plan of printing such portraits on an elastic fabric may prove very successful in practice.

Of course, it is understood the picture is simply made at first, to be copied afterwards from the elastic fabric when the lines have been corrected.

And it must be remembered that the end in view is to correct the irregular lines of the face while preserving the likeness *in its full force*—a feat so rarely accomplished by even the best portrait painters.

But, as I said before, it is not my intention to discuss the face that has uniformity in its irregularity to-day.

It may be well for me to say, before going further, that my remarks to-day will not in any sense apply to retouching the negative, or to the finishing of the print, but wholly to the duties that come within the province of the operator.

Let us now give a little attention to features that are hopelessly irregular.

Observe, I do not refer to faces that are repulsive, only to those faces that somehow are usually attractive except when seen in a photograph.

The eyes may not be "straight," the jaw is to one side, the mouth is higher on one side than the other, the nose, as the carpenters would say, "is just a trifle out of plumb and carelessly hung," the face is full on one side and flat on the other, one brow has an arch look and the other is expressionless—some or all these peculiarities—none in an excess—all in a degree—just enough so that you and I can see at once that the face is decidedly out of balance.

Perhaps, from the very fact of our familiarity with them, we are too apt to imagine that good judgment has not been employed in their construction. I say they are very common—in fact, they are a staple article in the transactions of the studio. They are brought there to be worked over into things of beauty. In general, the owners of these faces are guileless of all suspicion as to how carelessly their features have been put together. And their friends are equally blind on the subject.

Gentlemen, as you value your reputation for common sense among well-bred people, and your standing in society, see to it that you are not the first ones to furnish these customers of yours, either by word of mouth or by photographic act, with any valuable information about their features, for just as certainly as you do so they will return to you again, not as you saw them aforetime, with smiling faces, but with clouds on their brows and proofs in their hands, with their eyes ablaze and their tongues heated seven times hotter than usual.

It will avail you nothing that all the facts are on your side—and all the common sense, too.

You may have arguments at your tongue's end, so forcible that they would affect the decision of a Chicago jury; you may present facts so plump and aggressive and irrefutable that a government investigating committee could *see* them, but all this is so much the worse for yourself. It will avail you nothing in an argument about a squint in a lady's eye or a quirk in her daughter's nose.

What they know they *know*, and you will be floored, at every sentence, "just as you deserve to be—so there, now!"

That is the popular verdict, and begging pardon of all the good-looking people in this hall (I don't see any of the other kind) for taking sides with the common enemy, it is my opinion also.

We have no right, aside from the vulgar law of might, to urge upon any lady or gentleman the fact that he or she has a carelessly-made face.

It is an unwarrantable outrage on a sitter's self-respect that I fear is but too common among photographers of small calibre.

But we are straying. These irregular faces—I have described one of them—are found everywhere in the front ranks.

My description is as likely to apply to a chief justice, a railway king, or a president of the United States, as to a laboring man.

But, with all their merits, there is one peculiarity about nearly all of them that is of vast importance to us as photographers, and that is, that they are, or seem to be, indifferent to little irregularities in their costume.

I know not why it is; but it is a curious fact, that with such persons more than with others the hair will be crooked in its parting, the bow will be carelessly tied, the collar will be to one side, the ruche will be crumpled and even mussy, the buttons on the dress will be unevenly set—perhaps one will be gone altogether; the comb will be prominent, and it is possible there will be eardrops that are not mates.

We are somehow always impressed that this class of sitters cares little for regularity and neatness in their costume.

I find that the plan usually followed by operators with such sitters is simply to "take them as they are," and then let the retoucher and the finisher do what they can, and finally wash their hands of the whole undertaking.

But this is neither conscientious work nor good policy. As artists, your work should commence at the beginning and before the sitter takes the chair. With this class of faces you should insist that the hair be arranged with perfect neatness, every feature of the dress should be studiously arranged with reference to regularity and even precision. The ruche or the collar should be just so high on the neck, and no higher. The comb, the tie, the pin, the chain, the bow, the collar, the ruche, the ribbon, must in their arrangement and their freshness, with such faces, be models of neatness and precision.

Remember I am speaking only of faces that are marked in their irregularity.

Insist that there shall be no large white bows to destroy the priceless shadows. Insist that there shall be no high comb, nor anything whatever that is loud in style nor extreme in fashion. In short, plan that every article that forms an accessory to the face shall be neat even to the point of precision and tameness, and thus wholly subordinate to the plain and homely features before you.

It would seem at first as though this correcting the accessory lines of the face into pronounced regularity would make the actual lines of the face, by the simple force of contrast, seem more irregular than before. I say it would seem that this correcting of the lines of the accessories of the face—by which I mean the irregular or slovenly lines of the hair, the collar, the tie, or the dress—would make the irregularity of the lines of the face seem more pronounced, but, if my observations have led me to a proper conclusion, such is not the case.

The real effect of it is to reduce the unpleasing appearance of wry features by surrounding them with obvious evidences of refinement and good taste; and this, too, is effected on precisely the same principle that the sharp line of a white collar cutting abruptly across the rambling and indefinite lines of an ill-formed neck distracts our attention from its ill-shape—a fact, by the way, in itself worthy of observation by photographers, who have pre-eminently, above all artists, to deal with and produce facts.

Next, having arranged the drapery to your liking, the sitter should be so placed that the position seems easy to the eye, yet having, more than with other subjects, a careful regard to the evenness of the shoulders and the avoidance of everything like a lopping or slovenly position. Everything should be arranged to give dignity to the features. As a matter of course this is necessary in making any portrait; but this rule, so often flippantly quoted, applies with a peculiar force to irregularly-formed faces.

I do not mean merely the dignity that comes from an easy balance of lines and place of honor in the lighting, but the greater dignity that always accompanies even a homely face when that face is represented at its best.

Now, the best expression of an irregular face as seen in a photograph is very seldom a smiling one, and yet we find that by some curious fatality photographers, as a rule, endeavor to secure on such faces either a smile or an expression that lies directly on the road to a smile. This is a great error, for, as a rule, the best and the most agreeable expression that can be formed on a plain face is a cheerful expression. A cheerful expression on the homely face is the photographer's great master-key that opens up all the soul that can materialize itself through the muscles.

It unlocks, for the time being, all the lines of beauty that have been gradually creeping into that face during the happy hours of a whole life, while to a great extent it neutralizes and overwhelms the less agreeable lines that have found their growth only in moments of trouble or pain. Let me not be misunderstood. I trust none will think I have made a distinction that has not a difference for its foundation.

I have spoken of a cheerful expression as something wholly distinct from all the various changes of the features that lead up to a smile. The difference really exists. A smiling expression may be secured on the instant by a judicious word spoken just in the nick of time, and it has its root in something that amuses; but the cheerful expression so much coveted by the friends is something of far slower growth, and far more difficult to produce in its full ripeness at the exact critical moment when it needed. It is as distinct from the cheaper smiling expression as a surly look is from a frown. But in what direction shall we act to secure a cheerful as distinguished from a smiling expression?

Here are two series of expressions wholly distinct from each other, yet divided only by a narrow line. Either expression may be changed to the other, yet neither can by any possibility be developed into the other.

Each man has his own way of putting himself in easy communication with his sitter, and idiosyncrasies cannot be ignored, yet certain rules must be observed. As I have before hinted, an expression on the smiling scale may be secured on the instant under almost any conditions; but to obtain the more difficult expression of cheerfulness all the surrounding conditions must lead up to the final result in an unbroken progression.

The room must be comfortable. There must be no surroundings offensive to the eye or unpleasant to the ear! No confusion!

The room must be free from all noisy or impertinent intrusion. No shuffling assistant or anxious proprietor must dare to approach the door. The operator must be free, absolutely free, in his mind from all anxiety lest some officious friend of the sitter shall intrude with tongue or presence just at the wrong moment and distract the sitter's attention or his own.

In short, the operator must be free from all anxiety whatever. He must be as free in his mind as a bird that sings, and then his conscious, perfect freedom will react upon the nerves of his sitter, and the *sitter* will feel free; the genial, priceless, willing-to-be-happy look will come to the face, and the natural feeling of hopefulness and the consciousness of occupying an honored position, and of being waited on by one who abounds in self-respect, and has an honest, free, unconcealed desire to give pleasure, will finally cause the unfettered expression of cheerfulness and content to model that face into all the beauty it is capable of expressing.

And that face must have been gotten up in a very slovenly manner, indeed, that has not some beauty in it.

One word in regard to lighting such faces. The lighting should be pure, decided, full of character, and as free as possible from all unnecessary reflections. It should come from as small a point as is consistent with soft shadows. The lighting should tend rather to crispness than to flatness, as we find is usually the case under the mistaken notion that you must be careful not to give too much prominence to homely features. This is a great error. Give to such features all the prominence you can—to the end that they may have *definiteness,* for all I have said hinges on this one word *definiteness.*

It means *everything* with plain faces, and I wish to enforce its importance.

If I have insisted that the irregular and slovenly lines of the hair and the garments be corrected into neatness and precision, it has been to produce definiteness.

If I have levelled the shoulders, straightened the tie, taken away the last vestige of a lopping position, it has been to produce *definiteness*.

If I have forced all the kinky lines to submit themselves to the rigid laws of artistic balance rather than ramble off into obscurity; if I have gathered up all the feeble lines that led up irresistibly back into the slovenliness of the dressing-chamber, and given those lines a stopping-place, I have done it to produce definiteness.

If I have strenuously insisted on pronounced cheerfulness in preference to all the more equivocal expressions, it has been to secure in the highest possible degree the noble quality of definiteness, which is but another name for ascertained truth.

[Great applause.]

The President.—Mr. Beebe, of Chicago, will now illustrate to you the method of preparing the ferrous-oxide developer.

Mr. Beebe, of Chicago.—I have had a good many questions asked me about that developer which I explained yesterday, so I thought I would show you how it is made. I use a glass pitcher for mixing in, so you can all see through it. This developer is best for the Carbutt plate. It is good for any plate. It is the best that I have tried in my work. I believe the Carbutt plate is the best in the market. These are the salts of tartar. I use a pitcher because it is so handy, you can pour it out when you want to. You take this quart of water, a quarter of a pound of carbonate of soda, and a quarter of a pound of oxalate of potash or oxalic acid; there will be an excess of oxalic acid, of course. I want some of you gentlemen to see this solution used. I will go out and try it, and you will see some of the results after a time. I just filter that [illustrating], and use two drachms of the solution, filtered, to a drachm of the saturated solution of the sulphate of iron. It makes the best developer that you can have to work with any plate at all. You want it so that you will have your litmus-paper decidedly red.

After testing, Mr. Beebe said: Now, gentlemen, there is your oxalate of potash ready to go to work with. Filter that, and use an ounce to a drachm of water and a drachm of sulphate of iron, and you will have the best developer ever made for working with any dry-plates. Have the vessel in which the mixture is made of sufficient size to permit considerable effervescence. Put in first the carbonate of potash, then stir with a stick, then pour in the oxalic acid; you cannot get all the acid to dissolve, you must filter it out. Give your plates plenty of time, and with a weak developer you can get good results.

The President.—Mr. Whitney, formerly of Norwalk, Conn., now of New York, will address you on "The past and the present of making sun pictures."

Past and Present.

Mr. President, Ladies and Gentlemen: The subject on which I have chosen to address you, "The Past and the Present of Making Sun Pictures," I would preface by a request—will those present who made daguerrotypes thirty-five years ago oblige me by rising? [A number of members arose.]

I see about a dozen. On the supposition that others present know but little of daguerrotyping, it may interest you if I speak *very briefly* of the manner of our working, of the struggles we encountered, and the difficulties experienced in getting a suitable light, contrasted with the facilities of the present, hoping that my remarks will be of a practical character and cheer you to the attainment of greater triumphs in this beautiful art.

The daguerrotype-plate, composed of copper and plated on one side with silver, when properly cleansed and polished, was exposed to the fumes of iodine only. In 1840 Professor Draper made the first daguerrotype in New York; the sitting was one hour; subject, his mother, with eyes closed. The picture is still preserved and highly prized. The length of time needful to make a picture was reduced from ten or fifteen minutes' time to one minute and thirty seconds. Southworth has a daguerrotype of his lady, 1842. In 1844 or 1845, the addition of bromine to the iodine coating was found a great accelerator, but caused much trouble by flashing over the plate and fogging the image. In those days we experimented with closed doors each morning before admitting sitters, and often found occasion to dismiss the subject without a picture, with excuses about the weather, dampness, etc. These troubles lasted until it was discovered that lime would hold the bromine and let off the fumes gradually, thus enabling us to get an even coating on the plate.

Still another important discovery was made that caused as much satisfaction to daguerrotypers as albumenizing the glass plates did to photographers. I allude to galvanizing the plates with a coating of pure silver. Now we had comparatively plain sailing, and the only remaining difficulty was to get a suitable light. The landlords in those days (and in fact the public generally) had but little faith that the business would ever amount to anything, *and to cut* into a building for a skylight was *monstrous*. Finally, I succeeded in getting a building erected on the roof of a four-story building with a skylight 12 x 16 feet, six feet from the floor, at an angle of 48 degrees, with this light. The daguerrotypes on exhibition were made in 1848. This year I made the first exhibition of sun pictures ever made in the United States at a State Fair in Syracuse; and the same year (assisted by G. N. Barnard and Mr. Davies) organized the first Convention for the promotion of the art, and to regulate prices, for even at that early day we had to contend with the cheap man. At that meeting a resolution was passed that no person be admitted to membership except he would agree not to take pictures for less than one dollar and fifty cents; also that none but practical artists actually engaged in making daguerrotypes should become members. At a subsequent meeting in New York, in 1851, similar resolutions (but more stringent) were passed, and for a time rigidly enforced.

But, Mr. President and brothers, we have done with the past; the beautiful daguerrotype is no more called for, but its lessons are not lost in this age of progress—lessons of patience and endurance needful to prepare us for the still greater difficulties pertaining to making photographs at that early day. In 1850, or 1851, Mr. Black came on from Boston with John Dimmore and taught me photography. I am also indebted to G. N. Barnard, who assisted me afterwards. It would be impossible for me to describe the hopes and fears, the joys and anxieties of that eventful week of instruction; suffice it to say that I gave up daguerrotypes, and was charmed with photography. I will not attempt to enlighten you upon making photographs; you have passed from the necessity of making your own gun-cotton, as we had to; from making gutta-percha bottles, and trays to hold your solutions; from albumenizing your paper, etc.; all these things are prepared for you, and can be bought. You have passed from the tedious sittings with the wet, and now with the dry-plates and rapid-shutter take your sitter unawares, thus securing a lifelike expression. What do we want more? By very many there is lacking *tact, taste,* and *skill*. You may have all the appliances, but without avail, if you fail to have *tact* to interest your sitter and seize the right moment for expression, *taste* to arrange suitable surroundings, and *skill* to complete the work. How are these to be attained, if we feel a desire to rise higher in the art? I will give you my experience. When I found a photographer making better work, getting better expressions, getting better prices than I did, I determined to find out the secret of his power. Such a one I found in Frank Pearsall, of Brooklyn. Let me give you a sample of his treatment of a sitter—I do not think he would object to the exposé, as I believe it is understood there are no secrets in this age; and if it is not so understood, the sooner we make that obligation on each member the better. Well, to my subject—Mr. Pearsall in the studio. The subject to be photographed having arranged all preliminaries at the desk, the particulars telephoned regarding the size and style of the picture wanted, Mr. Pearsall has that portion of his studio arranged for the subject that affords the most suitable light and shadow. While the plate is being prepared Mr. Pearsall greets the sitter, and conversation begins. The studio, aside from being elegantly furnished, is filled with bric-a-brac, toys of various kinds, music-boxes, and dancing figures, to amuse old and young. The objects excite curiosity, induce questioning, and sitter and artist get in familiar conversation; the sitter is shown a seat, which is taken more as a rest than with reference to having a picture taken; should the position be natural and easy, the chair is wheeled in proper light, the head-rest adjusted, and the assistant, with the prepared plate, puts in an appearance. The camera has an elongated slide (Mr. Pearsall's patent) that receives the plate on a line with the focus-glass; the assistant then proceeds to focus the sitter, then slides the frame, at the same time drawing the slide. Meanwhile Mr. Pearsall has the sitter well in hand, and keeps up conversation while adjusting a singular piece of mechanism which may or may not be intended for an eye-piece; but his movements excite a lively interest on the part of the subject, and when the right expression is obtained the rubber-ball is squeezed, and one picture is taken; then he snaps his fingers, which being understood by the assistant operator, the slide is moved for the second exposure, and under pretence of focussing, the interest of the sitter is maintained until a second sitting is made. Before I understood all these points, Mr. Pearsall invited me to sit for him; two plates were used, and four pictures taken without my knowledge, and this was before we had the dry-plates, or the quick process. The result was the only good photograph I ever had. Is it any wonder that he has a profitable business at remunerative prices? But Mr. Pearsall is only one of a host of worthies whose names should ever be held in remembrance, and to whom we are all indebted for the influence their work has had in stimulating us, and giving tone to our profession at home and abroad. I will name a few of the older ones, and those who have interested themselves in the Convention of the N. P. A. and P. A. of A.

Passing reverently by those stars (Professors Draper and Morse) by whose light the darkness of our early daguerrotype days was lightened, (Mr. Southworth experimented with them), we will speak of those whose work aided us practically. M. M. Lawrence, in 1844, was my instructor, and built the first high-side and skylight. After a short absence from the city, I can never forget the impressions made upon me by the rapid strides in the art—Brady's collection of daguerrotypes of distinguished Americans; Gurney's daguerrotypes, ivorytypes, and oil paintings; Fredericks' pastel and water-colored life-sized photographs—he was the first to introduce artists into this country to color photographs; Bogardus, among the first to make and the last to quit making daguerrotypes; they were beautiful and life-like pictures. He was the first to introduce in connection with his photographic gallery an art gallery of paintings and artists' supplies; his pictures of distinguished clergymen were fine, but he was more particularly known, as Rockwood is, as the family photographer.

These two have supplied our citizens with more good pictures of their wives and children than any other two in the city. Rockwood was first to make a commercial use of heliotypes, or pictures in printers' ink. He also made the first carte de visite ever made (as such) in this country—subject, Baron de Rothschild—and the first to use dry-plates for gallery work, bringing plates from Europe one year ago; now using Eastman's plates in large quantities. While Kurtz, Sarony, Howell, and Mora have been justly celebrated for artistic photographs of celebrities, Mr. Kurtz has charmed me with the productions of his pencil and brush, and Sarony with his crayons. We like to be called artists; but what a gift to be an artist! We are all pleased to see Mr. Kurtz represented here. One of his pictures, a little girl in a window, is an inspiration—a charming study, worth a journey to see. And what influence did it have upon you, my brothers, when at Philadelphia, at Buffalo, at St. Louis, and at Cleveland, to see the elegant work on exhibition from Rocher, Hesler, Landy, Kent, Ryder, Scholten, Gentile, Pearsall, Gutekunst, Wenderoth and Taylor, Black, Trask, Fitzgibbon, Soeffler, Schreiber, Bell, Frank Jewell, Singhi, and last, but not least, our worthy President, John Carbutt?

And now, in closing I will ask, how did you, and I, and all these I have mentioned, acquire and perfect ourselves in these beautiful arts? Ah, my brethren, to be honest, don't say I found it out. Give credit where it is due; go back with me thirty-five years; in my closet you will find *Seeling's Journal*, *Humphrey's Journal*, *Snelling's Journal*, *Philadelphia Photographer*, *Photographic Times*, English journals, *Fitzgibbon's* and *Anthony's Bulletin*, and *Walzl's Photographer's Friend*.

What has been accomplished during the past twenty years through the influence of the photographic journals, conventions, and societies, only *you*, who first began the race, can realize. I remember when operators were enjoined to secrecy by their employers, when the dark-rooms were as secluded and sacred as a Freemasons' lodge. What rivalry existed in regard to exhibitions at annual fairs! I remember one very remarkable instance, many years ago, when the solar camera was first used—Brady and Gurney on Broadway, side by side, each one, *unknown* to the other, preparing life-sized prints for the American Institute. I had access to both. Brady prepared his paper for a group of three in an immense tank of gutta-percha seven feet long by five wide, and floated it on a silver wave that cost one hundred dollars. Gurney spread his with cotton. His subject was a lady, full size of life; but Brady took the prize. Brady's picture hung in his Washington gallery for twenty years, and may be there now.

Another question, How do we all get such beautiful effects in our pictures? whence come the rustic gates, the artificial rock, the uprooted tree, the balustrade in imitation of stone, ivy covered? whence the boats, the sleighs? Ask our Local.

My brothers, are you satisfied with the past? I am not. Make much of the present; and make the words of Ryder, Wilson, and Klauber—the Executive Committee—good. It is expected that this Convention will be one of the grandest events in the history of photography.

The President.—Our last session will be to-morrow morning, for the purpose of electing officers and of fixing the next place of meeting. Most of you have doubtless seen the notice that certain prizes have been offered for the makers of specialties; on its face it has the appearance of being recognized by this Association. It has no recognition by this Association, but it has been thought best to bring it before you, that those who are interested in offering the prizes may have an opportunity to explain.

A discussion now followed upon the propriety of appointing a committee to award prizes offered by private parties, and a motion being made to do so was lost.

THE PRESIDENT.—Miscellaneous business is now in order.

MR. KLAUBER.—I move a vote of thanks be extended to those who have made exhibitions of dry-plates. Agreed to.

Considerable discussion now followed upon the nominations made by the committee for officers for the ensuing year. Messrs. J. F. Ryder, J. H. Fitzgibbon, and Edward L. Wilson, all declined to serve upon the executive committee for good reasons. Their declinations were accepted, and a committee of the whole formed to make new and further nominations. After doing this, the session adjourned until 2 P.M.

THIRD DAY. AFTERNOON SESSION, THURSDAY, AUGUST 18TH, 1881.

The Convention was called to order at 2 P.M.

T. C. Roche was introduced by Mr. Klauber, and asked to explain his method of working dry-plates.

MR. ROCHE.—I find that where you take the ordinary ferro-sulphate development, the same as they are using over in Europe, they say you have got to be very particular about the time of exposure. For instance, you want to take a plate that requires five seconds exposure, and you give it one second, the plate is under-exposed. You give it ten seconds and the plate is over-exposed, but you give it five seconds and the plate will develop all right. Why? Because you have got a standard developer; it is made of a certain strength. If it is wrong, you can make it work. Take your ordinary oxalate-developer; you make what is called a saturated solution, and take plain iron and make a saturated solution of that; then make a solution of twelve grains of bromide of potassium to the ounce of water. You want to develop say a plate 8 x 5 or 8 x 10; you take the oxalate-developer, neutral oxalate of potash, and you want to ascertain, when you dissolve that neutral oxalate of potash, whether it is acid or alkaline. If it is alkaline when you put the iron in it, it will not hold the developer in solution two hours. Ascertain the reaction on blue litmus-paper. After you pour these three ounces out, you take one drachm of a twelve-grain solution of bromide of potassium and put that in. Then you take one ounce of your iron solution to those three ounces of oxalate-developer. Your oxalate-developer will hold and retain and use but one ounce. A gentleman, this morning, exposed a plate for one second, another man exposed another plate of the same kind twenty seconds; one plate was under-exposed and the other over-exposed. When you bring your plates in, as you do not know how the plates will develop, it is best to start the development with a weak solution of iron. You can use one ounce of iron to three; no more. You start with a weak developer; if you find the picture is not coming out, you can add a little more iron; build it up gradually, until you have the whole thing under your control. If you over-develop it, you have nothing but a foggy, thin plate, no matter whose it is. It is not the fault of the plate; it is your own fault in not following up your instructions. Gentlemen, if you will come down to Anthony's, I am willing to give you all that I know, and do all that I can for you.

THE PRESIDENT.—Mr. L. W. Seavey will occupy your time a few moments in describing the oxalate-developer and the different strengths used, and how it is used, from his own practical knowledge.

MR. L. W. SEAVEY.—Gentlemen, this method of developing was invented or discovered by Mr. Frederick York, of England. A full description of it will be found in the *Year-Book of Photography*. These solutions were mixed up for me by Frank E. Pearsall, of Brooklyn. They are the same as he uses in his gallery in every-day work. The solutions are as follows:

No. 1, which is mixed up and put in this bottle, is one of iron and twelve of oxalate. No. 2 solution is one of iron and six of oxalate. No. 3 solution is one of iron and three of oxalate.

In the last bottle is the intensifier, which is one of iron and twelve of oxalate, and three grains of bromide of potassium to each ounce of the solution. The object in arranging the chemicals in this manner is to facilitate the operations in the dark-room. There are no chemicals to be prepared or mixed. These solutions will develop from one hundred and twenty to two hundred plates without any change or alteration. I have developed in the first one, which is the weak one, and in the middle one (No. 2), four dozen plates, and this morning we exposed and developed a plate—a Cramer and Norden plate—which is the only one; there is no other one used. By a mistake the time was not given, and here is the negative, which I will show around. This negative was treated in the usual way.

Q. Are these solutions capable of being used after having been exposed to the light, as you are now exposing them—these developers?

A. Yes, sir. I will come to that presently. After the solutions are mixed and poured into these glass bottles, sufficient kerosene oil is added to seal the solution, and keep it from being affected by the air. There should be about a quarter of an inch of the best kerosene oil on top of each one of these solutions.

Now this frame has been brought from my dark-room, and it is arranged with the extra plate and a cord, so that when you are through developing, or in the intervals, it can be lifted up its height and admitted to the room. There is another ventilator besides. We will suppose that this is arranged—this is on the outside. Suppose that I am now in the dark-room, and I am ready to begin operations. All of these baths are attached to the wall with a hinge at the bottom, and secured also to the side of the wall is this little support; it is up in that position [illustrating]. Now when I get ready to operate, this is tipped forward; it rests there until it rests on the bottom of this slot; it then holds it in position, so that when I am standing in the room I can see the surface of the negative. I can stoop down and look through it and see the density of the negative. The bottom of this trough is lined with zinc; at the end of it is a small tube and rubber hose, which are connected with the sink.

In very warm weather it is advisable to keep the baths cold, so this is made that you can put in a moderate quantity of ice. After having exposed the plate, the first thing is to thoroughly wet the surface of the gelatin. Great care must be taken that the surface of the gelatin is not touched with the fingers, otherwise the fingers, being slightly greasy, will repel the developer and also the water. I handle the plate under the tap, letting the water run down one edge of the plate, and I then turn it around and let it run down the other edge, until it is all over the surface of it. Then I place it in the bath, and immerse it in that way. For working plates 8 by 10, the baths should be somewhat larger than these. There is not quite leeway enough between the plate and the under surface of the oil. After examining the plate, and keeping the plate in the bath until it is thoroughly moistened, I lift it out and examine the surface of it, letting the water run over it to see that it is evenly moistened all over, and that there are no little spots repelling the water. Supposing that it is thoroughly wet, and I am satisfied it will repel the kerosene oil, I then take a plate,—and have a quantity of water on here,—let the water run slowly to the lower edge of it, and then plunge it into the weak developer; but immediately on plunging it in, it should be kept in motion slightly to the right and to the left. This is tipped forward, about there [illustrating]. I then watch the development from the face side, the light coming through this ruby glass. By the by, this is ruby glass, and it is a very good thing to use. After waiting a moment, if I am satisfied that the exposure has been too short, I pull the plate out and immediately shove it into the second one [illustrating]; shove it right down into it. After it has been in there a moment,—there is no danger of the oil sticking to the surface, keep it in there,—watch the development from the face and from the under side;

it can be drawn out and examined in this way. Now there is oil on the surface of it. After letting the development proceed as far as it seems desirable, it is then washed under the tap, and I have used a small stick with some cotton tied to the end of it. If the film is sufficiently firm to admit of it, this can be rubbed around here, although it is not always necessary. I did not use it this morning. I used it on the top of the plate, so that when it is replaced it rinsed off very clean indeed. After having rinsed it off, it is then put into another bath, which should be a glass one. I place that on the dark side of the dark-room,—put that into the bath, plunging it down in at once; that contains hyposulphite of soda. The advantage of having a glass bottle for holding it, is that you can wash it right through the surface of the glass. You lose no time in pulling it out and examining it, to see if it is cleared off. It simply stands in the bath, and you can look at it and see if it is cleared off. As soon as it is, you take it off and rinse it. The way that I worked recently, was to have the alum and the hyposulphite mixed together in one bath, but some prefer to have the alum solution separate. And that, gentlemen, is all I have to say on that subject.

The President.—I have great pleasure in introducing to you Mr. O. G. Mason, of the Bellevue Hospital, New York, a photographer, and Secretary of the American Institute; he desires to make an explanation in regard to the action of the photographers of New York.

O. G. Mason.—Mr. President and gentlemen, until within a few hours of the present time, I did not expect to be here before you in any capacity, much less as an apologist, if what I may say may be deemed an apology. I have always supposed, or for the last twenty-five or thirty years, that photographers were a respectable body of men, that they were entitled to the treatment due gentlemen, and I have yet some lingering hope that I may be enabled to retain that same impression. But you, as a body of gentlemen, may think strange that you have met with the reception in New York that you have from New York photographers, and I wish to tell you that it is not the fault of the New York photographers at all.

As long ago as last March the photographic section of the American Institute appointed a committee, and authorized that committee to confer with the officers of this body, and with those who had charge of your meeting here in New York at this time, and offer them any assistance which we might be able to give in any way, shape, or manner. We did not wish to be considered anything but private soldiers, and we were willing to shoulder our muskets and to do the best we could in the noble fight.

In the succeeding months, the other society of New York appointed a similar committee, and empowered it to perform a similar duty. These committees met jointly, and decided to meet the local Secretary of your organization and to offer him any assistance which they might be able to give. They communicated with him, and a day was appointed on which they were to meet your local Secretary. The gentlemen attempted to meet him, but he failed to appear. They were given to understand, as I have been told, that this body was not looked upon as a photographic society in all respects, but they were coming to New York to have a picnic, and they were going a-fishing, etc.; and the Secretary was away looking out the grounds where it was best to fish, consequently they failed to meet that gentleman. And they also failed to receive from him any communication of any kind as to anything which they might do, and at the next meeting of the Institute we had something of a lively meeting, you may imagine, upon the treatment which we felt we had received, and the men demanded at once that the committee be discharged, as it was evident that they were not wanted. Such action was opposed by several gentlemen present who felt a little conservative. They said no; we may have a chance. There may be some mistake about the thing, but we have never had a chance to do the first thing, and consequently you see New York represented as you do. We were told that it was an exhibition more for showing parties backgrounds and so forth, and I see you have a splendid display of backgrounds, even running over into the next room. But

I assure you, gentlemen, that we felt worse about it than you can feel. We feel as though we had been denied the privilege which belonged to us, and we trust you will forgive us, if you think that we are guilty in any respect in this matter. We have done all we could do, and we were not allowed to do anything, consequently we have not done anything.

Mr. John F. Singhi.—I have heard the speech by the gentleman on the floor in regard to the state of matters here during this session and before its commencement. I for one am glad to receive his apology for them; but there is a point that I think would have been well for the New York photographers to have considered, and that is, whether they should not have shown the courtesy of New York city towards this body independent of any local Secretary—any one man, two men, or three men, we will say. It appears to me that if I had been one of the New York photographers, there would have been some courtesy shown this body in spite of Mr. Seavey or anybody else. ["Good!" and applause.] That is what I mean, and I stick to it. If I had been here, I should have said to the New York photographers, if I had been one of them, we will meet this body here in this hall and show that we have some respect for this institution whether Mr. Seavey wills it or not. That is all I have to say. [Cries of "good!" and great applause.]

J. T. Taylor.—I regret very much that I did not hear the opening remarks of our friend; but as one who took an active interest, as one who always takes an active interest in such things, and who was interested actively in the getting-up of that committee, and as one who officiated as the secretary of it, who brought together the two bodies to amalgamate them as one in a committee, and who by arrangement with Mr. Seavey, your representative, when we waited upon him, but were not received by him, I hold that we did everything that lay in our power. We showed that we had the good-will, and we showed all the good-will that could have been shown. We had communicated with the leading photographers who were willing to come here and do all they could for us—Mr. Cramer and others, Mr. Mora and Gambier and Sarony and Bogardus; but there was no way of communicating with you except through your local Secretary, and that was done.

The President.—Mr. Dumble will now proceed with his further illustrations of posing under the skylight.

Mr. Dumble said: Mr. Gambier is expected momentarily, and in the meantime I will make one posing that most of you know all about. I will make a picture with the face a trifle darker than the background. It is a very beautiful style of picture. I find that I can often take a face that is hard to manage in any other way and make a profile. This is the way to make the face a little darker than the background. We get something that will reduce the size of the nose, the prominence of the chin, and the size of the forehead. I will make one, showing how I do it, and then the other gentlemen can do the same thing in their own way or in a different way.

Mr. Poole.—I show you now what is called Gatchel's apparatus, which is really a necessity with gelatin-plates. You see the mode of its action. By squeezing this rubber bulb, which you hold in your hand, it opens the valve in the camera, and there is nothing to attract the attention of the sitter. When you are ready, it answers to your motion; all you have to do is to squeeze the bulb. It lacks one essential feature, however, I must say, in regard to its being as perfect as it might be, and that is as to its rapidity; it is not rapid enough for outdoor use. It is intended for indoor work. That exposure would not be adapted for instantaneous work as quick as it is.

Mr. Seavey.—I would move that we tender a vote of thanks to Mr. George Hays, of New York, for his kindness in putting in this skylight. Agreed to.

There is one other subject on which I might say a few words. Before I was appointed the local Secretary, I accidentally had some conversation with Mr. Charles Wager Hull, Superintendent of the American Institute, and the question of where the next exhibition would be held came up. Some other points were mentioned, and he said he thought New York would be the best place; that he considered the American Institute an organization whose aim was to foster all improvements in science and the industries of this country, and, he said, we will offer you our building free of charge. He also gave some other reasons for holding the exhibition here. I wrote within a few days to Mr. Douglas, of Chicago, and I gave him some ten or twelve reasons in that letter, and the result was that it was decided upon to hold the exhibition here, and we are now occupying this immense building without any cost whatever to ourselves—no rent of any kind. Therefore, ladies and gentlemen, I move that we give to the American Institute and to Mr. Chas. Wager Hull, its superintendent, a very earnest and hearty vote of thanks. Passed unanimously.

Mr. Singhi.—Mr. President and gentlemen, if there are a few minutes to spare, I would like to describe a skylight that I am using.

The President.—We shall be happy to have you do so; it is that kind of practical knowledge that we wish brought out.

Mr. Singhi.—Suppose that to be the floor-line. I have here three feet of wood. My light then runs at about that angle. It is thirteen feet square, all one light. I have a shed roof, which runs down to ten feet, back of the building. It was made on purpose on top of the building,—on top of the roof of the building. My light comes from one direction. The sitter is in focus everywhere,—everywhere from head to foot. He will be equally lighted at the feet as well as at the head, if the angle at the top and the head strikes back here; if you carry him back twenty-five feet, it will do so. A person standing anywhere in the room here [indicating], will be lighted from head to foot. This is done with one line of light. I have used this light for some time; I like it better than a skylight with a side light. The sitter is generally placed in that position [indicating]. If my camera is in the centre, I have the advantage by moving from one side or the other; whichever side I wish to shade, I get as much shade or as little as I desire. A Rembrandt lighting I make in the same manner that I do with this light, exactly. My groups I make by grouping them around the back there [indicating], some twenty-five feet away, with the lens at this point, making a full front light, equally lighted, and lighting perfectly the whole group. If that is of any benefit to you, you are welcome to it.

Q. How high is it from the roof?

A. Fifteen feet. The angle cut off by the wood base is three feet; this is of wood, and from this point the light commences. It answers for a top light and a side light. With this light there are no deep shadows under the nose nor any projections.

The President.—I have the pleasure of introducing to you one of our oldest veterans, A. S. Southworth, of Boston, who will now address you in a few remarks.

A. S. Southworth, of Boston, was now introduced, and gave at length his method of photographing for law cases and expert work, which was very interesting and accompanied by specimens. Want of space prevents the publication of his remarks. His work has often been published to the world in the daily newspapers. He is without a peer in such expert work.

A committee of three was appointed to recommend a location for the Convention of 1882.

The Secretary.—I want to say here that the adjournment to-night will be until to-morrow morning, when the election of officers will be held, and the place, of course, selected for the next Convention, and then we will adjourn after that session *sine die.* Of course, we adjourn to-night to meet to-morrow morning at the usual hour.

The President.—I will appoint on that committee, on the location of the next place of meeting, Mr. Ives, Mr. Lukens, and Mr. Hardy, of Boston.

On motion, adjourned.

Fourth Day. Friday, August 19th, 1881. Morning Session.

President Carbutt in the chair.

The Secretary read a communication from George O. Brown.

The President.—I have also a communication from C. Gentile, which will be read.

On motion, this communication was placed on file.

A report was presented by the committee that examined the negatives and prints sent in for competition for the prizes, but it was not received.

THE PRESIDENT.—The next business in order is the election of officers for the ensuing year.

The list of nominees for the ensuing year was read.

The President appointed Mr. Reid, of Iowa, and Mr. Whitney, of New York, as tellers, and Mr. Copelin, of Chicago, and Mr. Bachrach, of Baltimore, to distribute ballots.

After the election, the tellers, having counted the votes, announced the result of the ballot as follows:

President.—Joshua Smith, Chicago.

Vice-Presidents.—D. A. Clifford, St. Johnsbury, Vermont; W. G. C. Kimball, Concord, New Hampshire; A. N. Hardy, Boston, Massachusetts; G. M. Carlisle, Providence, Rhode Island; William Kurtz, New York, New York; B. L. H. Dabbs, Pittsburg, Pennsylvania; N. H. Busey, Baltimore, Maryland; C. W. Motes, Atlanta, Georgia; W. W. Washburn, New Orleans, Louisiana; P. H. Rose, Galveston, Texas; Gustav Cramer, St. Louis, Missouri; A. H. Plecker, Virginia; T. J. Robinson, Mississippi; T. M. Schleier, Nashville, Tennessee; W. E. Johns, Lexington, Kentucky; E. B. Ives, Michigan; J. Landy, Cincinnati, Ohio; F. R. Barrows, Ft. Wayne, Indiana; Smith, Peoria, Illinois; Gustavus Bode, Milwaukee, Wisconsin; R. W. Dawson, Little Rock, Arkansas; R. F. Elliott, Georgetown, Colorado; J. S. McAllister, Columbus, Nebraska; E. D. Ormsby, San Francisco, California; Mrs. M. A. Eckert, Helena, Montana; Harry E. Wallace, Alabama; S. Jarvis, Ottawa, Canada; F. J. Haynes, Fargo, Dakota; H. R. Farr, Minneapolis, Minnesota; John F. Singhi, Rockland, Maine; J. E. Bilbrough, Dubuque, Iowa; J. T. Mason, Leavenworth, Kansas.

Secretary.—J. Cadwalader, Indianapolis.

Treasurer.—J. E. Beebe, Chicago.

Executive Committee.—J. A. Scholten, St. Louis, Missouri; J. Landy, Cincinnati, Ohio; A. E. Dumble, Rochester, New York.

The Committee on Location recommended Milwaukee, Wis., for 1882. After a long discussion a ballot was had, which decided in favor of going to Indianapolis, Ind.

MR. PEASE.—I move a vote of thanks be tendered to the officers of this Association, especially Mr. Gayton A. Douglas, for the able manner in which they have carried out their duties in making this Convention a complete success. Agreed to.

MR. CARVALHO.—Before this Convention closes, I would like to offer a motion in the shape of a resolution, that a committee be appointed to take into consideration the feasibility of the establishment of an International Photographic Association, to communicate with the different Associations throughout the world, to get their opinions on the subject, and to report back to this Association at a stated meeting. This motion was agreed to.

THE PRESIDENT.—You will be kind enough to put that in writing, and I will put it before the Association.

This was done and the resolutions were adopted, and the President appointed D. M. Carvalho and W. Kurtz, of New York, as the committee.

MR. SCHLEIER.—I move that a resolution of thanks be tendered to the Photographic Section of the American Institute for the use of this building, and also to the Cooperative Association of New York for their good-will in offering their assistance to this Association, and our regret that circumstances were such that their assistance could not be obtained. Agreed to.

Upon motion of the Secretary, a vote of thanks was tendered the Scovill Manufacturing Company for apparatus, appliances, and the badges presented to the members; to E. & H. T. Anthony & Co., for furnishing apparatus, etc., and to Mr. A. H. Atwood, for attending to hotel accommodations.

On motion of Mr. Gentile, a vote of thanks was tendered to Mr. Roche for his kindness in extending his knowledge to the members as to the working of dry-plates, which was accepted by Mr. Roche.

THE PRESIDENT.—Now, gentlemen, as we are about to disband, I think you will all agree with me in saying that this has been a very beneficial meeting, both in the sense of practical work and advanced education. I hope that when you go back to your studies you will have the means of carrying out what you have learned in the way of education and self-culture, and that when we meet again next year, at Indianapolis, the benefits will be present, proving that this meeting has not been in vain. I wish you all good-by.

Mr. Green.—I move that we adjourn to meet in Indianapolis, Ind., on the second Tuesday of August, 1882. Agreed to.

Adjourned.

List of Exhibitors.

(From L. W. Seavey, Local Secretary.)

W. Kurtz, Marc Gambier, G. W. Pach, R. Witte, Van Sothen, E. T. Whitney, E. F. Weber, W. F. Ashe, George Murphy, L. W. Seavey and S. Horgan, New York city; G. Frank E. Pearsall, Brooklyn, N. Y.; A. M. Brown and A. E. Dumble, Rochester, N. Y.; A. M. North, Afton, N. Y.; George Hayes, New York city; Douglass, Thompson & Co., H. Rocher, Barthold Meyer, Hiram J. Thompson, C. D. Mosher, and A. Hesler, Chicago, Ills.; Jas. H. Smith, Quincy, Ills.; J. A. Gorham, F. W. Guerin, Cramer & Norden, J. C. Somerville, J. A. Scholten, and J. H. Fitzgibbon, St. Louis, Mo.; W. D. Gatchel, Cincinnati, Ohio; J. F. Ryder and W. R. Reid, Cleveland, Ohio; Allen Bros., Detroit, Mich.; E. L. Wilson, Gilbert & Bacon, John Wyeth & Co., John R. Clemons, John Carbutt, Wilson, Hood & Co., and A. M. Collins, Son & Co., Philadelphia, Pa; B. L. H. Dabbs, Pittsburgh, Pa.; A. M. Allen, Pottsville, Pa.; E. A. Gilbert, Meadville, Pa.; John H. Henning, Jownstown, Pa.; F. M. Spencer, Mansfield, Pa.; B. M. Clinedinst, N. H. Busey, Daniel Bendann, and D. A. Woodward, Baltimore, Md.; Benjamin French & Co. and E. J. & W. H. Partridge, Boston, Mass.; D. T. Burrell, Brockton, Mass.; M. H. Albee, Marlboro, Mass.; C. F. Richardson, Wakefield, Mass.; C. A. Schindler, West Hoboken, N. J.; August Semmendinger, Fort Lee, N. J.; J. A. French, Keene, New Hampshire; J. W. Bryant, La Porte, Ind.; P. H. Rose, Galveston, Texas; A. H. Plecker, Lynchburg, Va.; D. A. Clifford, St. Johnsbury, Vt.; W. S. Chandler, St. Albans, Vt.; Thomas, San Francisco, Cal.; E. Klauber, Louisville, Ky.; John F. Singhi, Rockland, Me.; John Stephens, Barrie, Ont.; Charles Clifford, J. S. Mason, Mr. Echard, John C. Howe, Forbes & Co., Mr. Nevis, E. C. Whitney, Mr. Pougret, Mr. Bingham, Mr. Hazleman, William Myles, Mr. Latham, Mr. Pine, W. Stine, Edward Evans, Mr. Krauss, J. E. Bilbrough, Cook Ely, Mr. Stearns, R. Benecke, Elliot & Co., Mr. Lawton, Mr. Lyons, Mr. Edwards, J. P. Blessing, A. C. Search, W. Lehman, D. S. Armstrong.

COLORADO AMID THE CLOUDS.

BY WILLIAM H. RAU,

(With William H. Jackson, Denver, Col.)

Some weeks ago, a small party of us started on a visit to Pike's Peak, Manitou, and the Garden of the Gods; so, of course, being a photographer, was persuaded to take my camera with me. It did not require much coaxing, as I was as anxious as they to secure some pictures of the various places to be visited, especially the well-known Pike's Peak. Well, we left Denver, at 3.15 p.m., on the pioneer narrow-gauge railroad, namely, the Denver and Rio Grande, the scenic line of America. This road passes through some of the grandest scenery in the world, but the journey to Colorado Springs is over a comparatively level country. I say comparatively level, as this same railway ascends some grades of 260 feet to the mile in the San Juan and Sangre de Christo Ranges. Leaving Denver in one of the palace-cars, reclining in an easy Horton chair, we are whirled rapidly south. To the right can be seen two hundred miles of the Rocky Mountains, Pike's Peak in the south, and Long's Peak in the north, while between these the horizon is fringed with snow-clad summits. As the train moves southward, we approach a little nearer the foothills with the whitened summits of the snowy range towering behind them. This gives one a grand view of the Rocky Mountains, and, as we slowly approach them, we are also ascending a grade, so that on reaching the Divide we have ascended 1811 feet higher than Denver, making us 7007 feet above the sea. To the left is a beautiful lake, named Palmer Lake after the President of the road. From the Divide we now begin to descend until Colorado Springs is reached, elevation 5870 feet; here we branch off to the right for Manitou, going due west, again ascending. This ride is extremely picturesque, affording as it does glimpses of the ridges, and also of the fantastic rock formations of the Garden of the Gods, and at 7.30 Manitou is reached.

Manitou, although shut in on three sides by Pike's Peak and its attendant cones and mountains, has an elevation of 6208 feet, according to Professor Hayden, a greater height than the summit of Mount Washington, the pride of New England. The train rounds the mountain-base, and comes to a stop in the picturesque bowl-shaped glen. To the left towers the snow-clad Pike's Peak to the height of 14,147 feet.

By this time all hands were wanting to refresh the inner man, and we were only too glad to be driven over in coaches to the Beebe House, one of the several large and elegant hotels of Manitou, said to be the most elegant west of Saratoga. After supper, although it was dark, many of the party visited the far-famed soda and mineral springs and drank of their deliciously cool and health-giving waters. Our bronchos were then ordered at the office, and all the necessary arrangements made for the morning's early start on the journey up the Peak. Bright and early next morning all hands were called at 6 o'clock, breakfast at 6.30, and start away at 7, intending to reach the summit and return by evening. I expected to be able to make numerous exposures on the trail as we ascended, having, as I did, a number of double dry-plate holders filled with Carbutt's Keystone plates, on which I knew I could depend. At 7 o'clock two guides with seventeen bronchos came thundering up to the hotel portico; then there was a time for selecting horses, several in some cases wanting the same horse, going, as they did, by appearances. I left it to the guide as to which I was to take, and as I was kept busy very much of the time they were mounting in distributing my photographic outfit among the party, fastening the camera on one saddle, a case of holders on another, etc., I was the last to mount. Well, a sorrier-looking animal than mine I never looked at, and the guide very kindly got me a lath for a riding whip. Thus equipped we started on our trip to the famous Peak, a trip I never dreamed of making and one never to be forgotten. Fortunately we had a very beautiful morning for our start, and as we galloped along the broad road in the direction of the Peak we anticipated an easy journey. For about a mile we ascended a gradual slope until we reached the Ute iron mineral spring, where a halt was made for a drink of cool water, from this we entered a narrow trail through the bush, in many cases grazing one's nether limbs, so close were the trees. Going on like this for about a mile we came to a small log building where tolls are collected for the use of the trail, toll being $1.00 per head. We then began following the creek which runs through the gorge—this stream is fed by the ever-melting snows of the surrounding hills and mountains. We followed up this, keeping on the right for about three-fourths of a mile, then wading our horses into the stream for them to drink and to give the guides a chance to sinch up the saddles, many, especially those of the ladies, having slipped back on the horses. This done with, we began the ascent in dead earnest. As the next two or three miles were considered the most difficult and dangerous on the trail, it was very slow travelling; but this only the better afforded us an opportunity for viewing the magnificent scenery.

In many cases we would follow a narrow trail not more than 24 inches wide, some parts of gravel, and again of rock and brushwood, and occasionally a rudely-constructed bridge, to the right of which one could look down at times from 300 to 500 feet. And I must confess that it was with fear that I entered this part of our journey, being as it was my first high-altitude trip; but being told to let the reins loose and let my horse take his own course, I did as directed, and soon found that, although my horse was not handsome to look upon, he evidently understood his business, and I kept getting more and more confidence in him, so that soon I had entirely overcome my dread, and was able to look back at times over the landscape as it was stretched behind us. During this part of our ascent we made occasional halts, in order to give the horses a chance to regain their breath. On ahead, afar out against the sky, towering high above us, was Gog, an immense rock and a landmark; further on was Magog, a similar rock, with a smaller one resting on its summit.

The music of the waters, falling and rushing down the gorge, called our attention away from the landscape, and showed us immense boulders that had fallen deep down in the gorge, hiding in some places the stream entirely. In this way we came to Rosemma Falls and Hidden Falls, hidden beneath the largest single loose boulder in the gorge. Beautiful flowers of bright blue and pink were strewn along the trail, and ever and anon one of the tourists would risk getting off his horse on this dangerous trail to procure some of these fragrant beauties; this part of the trail twisted and turned very much, in one place going around an immense rock, and as the first ones passed behind this rock, it reminded me forcibly of Ali Baba and his forty thieves entering their robber's den, especially since nearly every member of the party had a scarf or colored handkerchief over the hat or around the neck, giving them all the more the appearance of brigands.

Sheltered Falls is sheltered by an immense flat rock, and crossing immediately in front of this is a rustic bridge. Being near the end of the line, I here witnessed the most beautiful sight yet seen on the trail,—of course, a string of seventeen horses in Indian file makes a large line, and as this string crossed over the bridge to the right, then again to the left on the other side, then turning abruptly at a right angle, going up a very steep narrow trail to the left, it presented a full view of all our party never to be forgotten. I wanted just here to stop and get an exposure or two, but on account of the dangerous location and the frequent stops to rest made for the ladies, there was no time for this. This was a great disappointment to me, but I was promised that on our return trip I would have ample time to take it. After leaving the Sheltered Falls the climbing is not quite so hard, still it goes up and up, and we pass great masses of decomposed granite. We were now on a level with Gog and Magog. After travelling about two miles of this, we entered an open park; here all hands dismounted and stretched their stiffened limbs, and some rolled in the grass, enjoying this short rest hugely, getting a drink of pure cold water. After resting ten minutes and again sinching, we once more started on the trail, the character of which now changed, not so much brush was seen, but more fallen and twisted timber, and more rock, but still the beautiful flowers. We could now occasionally see the trail a mile ahead, and see its steep windings around and up the peak side. During our coming up the gorge the peak was hidden, but it now stood forth against the deep blue sky, and it still looked as far away as ever. Travelling a mile or two of this character of country, we had now ascended as high as Cameron's Cone, 10,200 feet, and could get a view of the seven lakes, which looked from this elevation like small pools of water. Very soon we were on rock bottom, and from this time on there was a constant clatter of the horses' hoofs over the loose red rock, which looked as if it were broken with hammers; shortly after we reached timber line and snow, above which there is said nothing can grow, still, even a thousand feet above this, we find in and among the rocks and snow the beautiful blue and pink flowers. No earth or ground is visible, nothing but rock and snow,—the latter now only lying in immense rifts and patches. Rounding a bluff we were suddenly struck by a breeze or gale that chilled us to the bone. Overcoats and wraps were put on, hats tied down with handkerchiefs and strings, and all hands made ready to battle the cold. It blew fearfully for nearly an hour of our ride, and at the end of this time all had colds, sniffles, etc., excepting our guides, who were in shirt-sleeves.

Until this time all was jollity, fun, and amusement, but this meant business, and three miles to go over yet of this barren, rocky, desolate-looking trail; still the sky was clear, and we kept up our spirits. Very soon we were on the edge of what is called the crater, over the edge of which yawned

2000 feet; the snow lay in huge rifts in and above this crater. The crater and unnatural upheavals of the boulders are supposed to be the result of volcanic actions, but there are no positive proofs of the same, as no lava can be seen. Finally, about 1.30 P.M., we heard a hallooing from the foremost of our party, who had at last reached the summit. This cheered us, and we finally all reached the United States signal station at about 1.45 P.M. Here we were at last on the summit of Pike's Peak, well known to every school-boy in the land. How well I remember when I was a boy in school that what is now the State of Colorado was known only as Pike's Peak, the ascent of which was considered by any making it at that time as a most wonderful feat. Now parties are going up nearly every day, many ladies among them. We had five in ours. On dismounting we were scarcely able to stand, our knee-pans felt as if they had been beaten. Our lunches were produced, and we all entered the signal station and ate them, being offered some very good coffee at twenty-five cents per cup, milk and sugar included. We found a large stove with a fire blazing in the station, giving it a cheerful warmth that was welcome to all. Feeling refreshed, we all took a stroll, if one may so call the climbing over huge stones and boulders of coarse disintegrating rock. To the southeast, in close proximity, is Bald Mountain, 12,000 feet high, adjacent to the seven lakes is Cameron's Cone, 10,200 feet, this was apparently quite close. Large foot-hills in New Mexico, south of the Spanish Peaks, fully 200 miles, and as far distant to the north, above Long's Peak, could be seen, and to the east was the vast and boundless prairie, stretched away for hundreds of miles. West of us lay the South Park, one of the large basins of Colorado, fringed to the west with the snowy range.

(To be continued.)

MESSRS. JOHN A. SCHOLTEN and F. W. GUERIN, St. Louis, Mo., gathered in all the prizes awarded the competitors who responded to the offer of Messrs. GENNERT and CRAMER & NORDEN. Negatives by both parties will be used for our magazine presently, when we shall have more to say about them.

GERMAN CORRESPONDENCE.

Goupil's Photogravures — Steinheil's New Portrait-lens—Sensitizing Gelatin Plates with Nitrate of Silver—Chloride of Silver Emulsions—Photographic and Painted Portraits—Gun-Cotton and Railroads—Warnerke's New Process.

SOME time ago I met the excellent heliographer of the Imperial printing-office at St. Petersburg, Mr. Scamoni, and am indebted to him for some first-class reproductions of very rare Russian copper engravings. He also showed me some experimental heliographs in half-tone, at the same time eulogizing the celebrated products of Goupil in Paris. He frankly stated that neither he nor any other heliographer knows the secret of Goupil's method of obtaining such excellent half-tones, the fact being that a few only succeed in producing anything similar. Interesting results in half-tone have been obtained by Dujardin in Paris, and Klic in Vienna, but they follow a process quite different from Goupil's, who works with galvano-plastic, while they do etching. It is certainly surprising that the details of a process which draws the attention of the whole world upon it, can remain a secret for such a long time. The principles of the process of the "lichtdruck" became almost at once generally understood, and it is to be hoped that heliogravure will not remain a secret to eternity.

Forty years already we have used the portrait lens, theoretically suggested by Petzval, and first practically made by Voigtlander. Other lenses have been introduced since, but a substitute for the portrait-lens has not yet been found. Dallmeyer tried to reverse the back lens of the system, and this is probably the only modification the objective has undergone thus far, but now Steinheil comes out with a portrait-lens of quite new construction, differing totally from the Petzval lens. The combination consists of two pairs of lenses—the front pair acting as convex and the back pair as concave lenses. Both systems are close together. Steinheil calls this new lens "antiplanete," which name indicates that both pairs of lenses have defects of an hantipodal nature, which neutralize eac other. The whole system is calculated to produce more clearness of the margin and more depth than the old objective. The prices are not high; an objective for carte-de-visite costing in American money fifty-two dollars. Apart from these objectives, which have as much strength of light as the old portrait objective, Steinheil manufactures, after the same system also, an instrument for groups, which is destined more for out-door pictures.

In my last letter I mentioned the increasing of the sensitiveness of the emulsion plates with nitrate of silver, with which I first succeeded with my gelatin-collodion emulsion. Eder and Pizzighelli made further experiments in this connection, but instead of ammoniacal nitrate of silver solution, they used simple alcoholic solution of nitrate of silver, to bathe the gelatin plates in. The effect was very favorable, and a material increase of the sensitiveness was noticeable with oxalate as well as pyrogallic development. With a larger percentage than at the highest ¼ per cent., red fog set in. Sufficiently weak silver bath of 0.05 to 0.01 per cent. of nitrate of silver, especially with oxalate (without addition of fixing soda, and containing abundant bromide of potassium), produced no fog at all. The color of the negative is not quite as dark as usual, but more brownish.

Both experimentalists tried also a solution of 0.15 to 0.03 grains of chlorate of silver in a mixture of 50 c.cm. water and 50 c.cm. alcohol, and also here a marked increase (about triple) took place; after twenty-four hours, however, the plates had become disintegrated in spite of having been kept dry, and did not give a picture, but thick fog. Eder and Pizzighelli hope to be able to obtain durable, highly-sensitive plates in this manner. Both experimenters publish, at present, a pamphlet on the employment of chloride of silver emulsion, which gives special attention to the production of chloride of silver gelatin pictures, and to all appearances these latter seem to have a future before them.

In the present passion of the photographers to produce something new and original, the hunt for striking postures plays a great rôle. If one compare the relatively simple poses which portrait painters employ in their paintings, with the various, often wonderful poses seen in photographs, one must certainly give the photographer credit for possessing more inventive genius than the former. And yet often the most simple pose in a painted picture is more effective than the boldest and most insinuating posture in a photograph. The reason is, that the painter has leisure to study his model more thoroughly; he has not *one* sitting only, but often twenty and more. He finds out the characteristic part of the expression and the pose. The photographer, however, in most cases overlooks the characteristics and "goes in" for the effective—the sensational. The painter, who wants to produce effect, has quite other expedients at his disposal, *i. e.*, the delicacy of the coloring, the minuteness in the execution of the flesh-tones and the drapery, the elegance of his drawing, and the correct tone of the ensemble. With this he often is a thousand times more effective than the photographer with his pose. The photographer often directs his efforts with standing figures upon effecting a strong contrast between the supporting leg of the person and the leg at ease. The latter is gracefully carried over the other, so that the toes just touch the floor. This often looks quite well, but when heavy persons, who sadly need both of their legs to support their three hundred weight, are seen in this dainty posture, the effect is anything but natural. Photographers usually take care that the head of the figure forms about the centre of the picture; painters, however, do not care anything about that; they often place the head quite on the side of the picture, and often do not even take much pains to fill out somewhat the empty space on the other side. In photography the eyes are made to follow the same direction the head points, and this ought to be so with good reason; but in painted portraits the eyes often look in quite a different direction than the head. Many photographers are in the practice of studying, in art exhibitions, the heads of the portraits painted by celebrated artists, and to imitate them, which latter practice ought to be followed with caution only. Sometimes photographers cause backgrounds to be made for them after celebrated portrait pictures, and not seldom with good effect; and although this brings the drawback that the same background must serve for many persons, while the painter makes a different background for every portrait, it is, nevertheless, not disturbing as long as the front of the picture is in harmony with it. The matter becomes conspicuous, however, when foreground accessories are employed. To cite an example: A much-admired picture by Gustav Richter represents the figure of a lady sitting upon a balustrade, from which a winding staircase leads to the foreground. After this picture a plastic balustrade with staircase was in fact made and employed in a photographic atelier. The thing was pretty expensive, without having in the least the expected effect, and from the photographs taken with it as an accessory, it was easily judged that Richter's picture owed its effect to quite other things than to the balustrade.

Recently a very annoying restriction has been revoked, namely, the order prohibiting the shipment of photographic gun-cotton by railroad. Collodion-cotton was considered a very dangerous stuff, liable to spontaneous combustion, and all the protests from photographic chemists did not help any. Now, it was an open secret that, in spite of the prohibitory order, large quantities of collodion-cotton have been shipped on the sly by railroads, for the stuff being an important factor in photography, and the photographer not being able or willing to manufacture it himself, he finds, in spite of all prohibition, means and ways to get supplied with the same. Of course, the shipper was always liable to be heavily fined, and often did get caught and fined. Now, happily, we are rid of this legal chicanery.

I have written you already about Warnerke's curious discovery that a developed gelatin negative behaves like a carbon print, *i. e.*, is insoluble in hot water, and can be transferred like a carbon print, and I have only to add, that the repetition of Warnerke's experiments did not succeed everywhere. In most cases the whole layer becomes insoluble through pyrogallic acid, and it is certain that the experiment succeeds only when a very easily-dissolved gelatin is used. Very truly yours,

Dr. H. Vogel.

Berlin, September, 1881.

FRENCH CORRESPONDENCE.

Last Meeting of the French Photographic Society—Sensitized Pellicles of Mr. Stebbing—Process for Reducing the Intensity of Over-Exposed Negatives—Photographic Art Gallery at the Conservatory of Arts and Trades—Examinations and Diplomas of Photographic Operators Organized by the Syndical Chamber of Photographers—Celluloid.

The last meeting of the term, 1880–81, of the French Photographic Society, although less important than those that preceded it, was nevertheless not without interest. The most important communication was that made by our learned colleague Mr. Stebbing, relative to sensitized pellicles. We have already on other occasions spoken of these pellicles, but it is opportune to revert to them now since their author has very materially improved them. Mr. Stebbing exhibited to the members of the Society the whole of his preparations and manipulations, and the prints shown in proof of his assertions fully demonstrated their correctness. As we have already said, Mr. Stebbing uses, instead of temporary supports, thin sheets of gelatin, rendered insoluble, and on which he flows the sensitive emulsion. These pellicles are used between two thin sheets of glass, or are placed directly on the surface of the glass, which has been previously covered with a sticky coating. The development is made in a dish in which the pellicle is placed, the sensitized coating uppermost. The developing and fixing baths and the washings are all placed or done in the same dish, which does away with the necessity of touching the pellicle up to the time at which it is taken out of the water of the last washing in order to place it upon a glass plate rubbed with talc; the four edges are kept in place by four strips of gummed paper and desiccation obtained, keeping the plate perfectly level. An ingenious little dodge has been conceived by Mr. Stebbing. A small quantity of candle tallow is rubbed all around the pellicle in order to avoid the infiltration of water between the coatings of collodion, gelatin, and sensitized emulsion. Neglect of this precaution will cause the certain loss of many negatives.

We have, with very great success, experimented with these sensitized pellicles, and we have remarked that the development should be conducted as rapidly as possible in order to prevent the gelatin swelling too much, which would inevitably produce breaks in the film, owing to the too great distension of the absorbing substance. It is therefore necessary to proceed rapidly in fixing and washing after the development. Alum very quickly, and after one or two washings immediately remove the pellicle, which, placed on the talc-rubbed glass and bordered with paper, dries the more rapidly from having absorbed but little water. We conclude from this observation that it is best to make use of strong developers. It would be useless to take up the time of our readers in explaining the advantages offered by a system which so considerably reduces the weight and the volume of the sensitized plates, rendering these last not only more portable, but also absolutely unbreakable. In our opinion the use of sensitized pellicles opens the way to still greater progress in the more general use of photography.

At the August meeting of the French Photographic Society, Mr. Audra advocated the use of iodized water in order to reduce the intensity of gelatin negatives that have been over-exposed. This idea had been previously suggested by Mr. Davanne. It is easy to understand the reaction that takes place. By contact with the iodized water, the reduced silver which forms the negative is partially changed into iodide of silver. Now, this last product being soluble in hyposulphite of soda, it suffices to pass the negative through a solution of this substance to remove the iodide of silver which had been formed. Proceed tentatively, repeating several times, if necessary, the details of the operation, until the negative has acquired the desired intensity. The iodized water should contain but little iodine. It is in good condition when it has the color of Madeira wine. Here is the formula given by Mr. Davanne:

Water, . . .	250 cc.	(8 fl. oz. 3 drms.)
Iodide of Potassium,	5 grams.	(77 grs.)
Iodine, in scales,	1.25 "	(20 grs.)

This same water can be used to strengthen a negative that is too gray, the yellow color of the iodide of silver being less actinic, but in this case the fixing-bath must be dispensed with.

Another manifestation favorable to photography is about to take place in Paris. There is being organized at the Conservatory of Arts and Trades a historical and practical collection of the specimens made by the principal photographic processes from the earliest times of this marvellous discovery. This is a good and useful thing, and a worthy example to be followed by other scientific nations.

The Syndical Chamber of Photographers at Paris decided at its last July meeting to make examinations of photographic operators, and diplomas will be granted to those who pass a satisfactory examination. From the reopening, which is in October next, this project will be in operation, and the programmes will be published as soon as they are approved by the Syndical Chamber. Thanks to these examinations, photographic art will have operators of ascertained merit and of better known morality. This excellent idea has caused the abandonment of the project of a school for operators, a creation of this kind presenting numerous difficulties. The better plan is to allow the operators to make their initiatory studies in France or elsewhere, as they may elect, and require only from them proofs of theoretical and practical capacity.

Celluloid seems destined to prove useful in phototypy. But it would be necessary before preparing the printing surface to make a solid adherence to a rigid body of the lower surface of the celluloid sheet, otherwise vexatious changes in the evenness of the printing surface are to be feared. We have no doubt that in the near future this translucent and resistant body will find frequent use in many photographic operations.

I take the liberty of announcing the appearance of my *Practical Treatise on Photoglypty*, a copy of which I send with this mail to our dear director and learned colleague, Mr. Wilson. It is not for me to speak of this work, in which I have done for the best. It is only necessary to make known its existence, and submit it to the judgment—friendly, I hope—of all my colleagues of the photographic art.

LEON VIDAL.

PARIS, September 5th, 1881.

SCHOLTEN'S GLACÉ PROCESS.

FOR a fine finish use plate-glass; else the first quality of French negative-glass will answer.

Clean the best side in an ordinary manner, and when perfectly dry apply very lightly, with cotton-wool, a little prepared chalk; then, with a soft brush, dust the plate, and gum the edges with any kind of gum. Before the gum is dry, collodionize the plate with plain collodion—consistency of collodion as will flow well. The next thing is to soak for one or two hours one ounce white French gelatin in eight ounces settled water, and dissolve fully by heat. While yet hot, strain through a piece of muslin into a small porcelain dish; immerse your print in this solution, and when well saturated take it out, scraping the back of the picture over the edge of the dish, to avoid waste. Place the print down on your prepared plate and press out the air-bubbles by means of a piece of sheet rubber five inches long and two and one-half inches wide, inserted into a wooden handle, like the well-known rubber squeege.

Now, when the picture thus put on glass is nearly dry, damp a two-ply piece of bristol-board, previously cut to size; paste on one side, put it over the print, pressing it well down with the scraper, especially the edges.

THE MOUNTING.

After thirty-six hours, or when perfectly dry, cut the picture with the point of a knife along the edge, leaving about one-quarter of an inch strip, and raise the picture slowly; then trim to size and gum the edges only; place down on the card, and for a weight, cover it with the same glass from which you cut it, or any piece of glass that is straight and clean. All dust and carelessness must be avoided or a bad result is certain.

You can put one or more prints on one glass, only be careful to keep away from the edge about half an inch or so. Keep the gelatin solution as cool as you can work it.

If the picture leaves the glass quite clean, you can use it again without recleaning; thus you may use it a lifetime, being cleaned but once.

OUR PICTURE.

To give variety to our embellishments, we present with our current issue an example of photography such as a few only of our readers have the opportunity given them to make.

It is a sweet little statuary group called *Brotherly Love.*

The original marble, which is life-size—the size of children say ten years of age—was brought from the Italian vessel which carried it across the seas from Rome directly to our skylight, in order that we might make the negatives for our purpose. This courtesy was allowed us by the owner, Charles Sharpless, Esq., a millionaire merchant of this city, who always very kindly allows us to choose from his superb collection of works of art whenever we are in need of such subjects.

The sculptor is Sig. Pietro Lazzerini, of Carrara, Italy, who also had several works at our Centennial Exhibition.

Its faithfulness to nature excites the admiration of all beholders.

All photographers are familiar with these dear child-subjects, and most of them love to pose them.

It is becoming quite the style now to make what is called photo-statuary. Such a name is rather a misnomer, however, for very few of these productions are worthy of being considered even tolerable imitations of statuary.

> "When they are good, they are very, very good,
> And when they are bad, they are horrid."

In order that there may be more good ones, therefore, and to help those who are ambitious in that direction, we place here for study a model which is *worthy* of study, and which can be readily repeated in photography.

Some of the most beautiful things of this kind ever done from nature, were exhibited at the New York Convention and Exhibition by Mr. John A. Scholten, of St. Louis (we are promised some negatives of them for our use presently). And while Mr. Scholten was East he arranged for a complete set of the beautiful child-statuary made by the Centennial Photographic Company, to be used by him as *studies*. Follow his example if you want success, and as near as you can in lighting and pose follow the models. Most of the attempts we have seen have been overlighted, and rendered incongruous and repulsive by the addition of etched pedestals. The pedestals for natural subjects need not be of marble, but they should be of substantial form, and lighted the same, exactly, as the figure.

With these hints and an excellent example to guide you, we leave the matter in your hands.

The prints were made on the extra-brilliant Dresden paper, the importation of Mr. G. Gennert, 105 William Street, New York.

Editor's Table.

THE seventh edition of his valuable *Handbook of Photography* has just been issued by Dr. PAUL E. LIESEGANG, editor of the *Photo-Archiv*, Dusseldorf, Germany. We have several times noticed previous editions of this admirable manual. It is thoroughly practical, beautifully printed, and will be of great value to all who can read German. The present edition reaches 544 pages, and contains over one hundred illustrations.

A PORTRAIT of Mons. LEON VIDAL, so well known to our readers by his works as our esteemed Paris correspondent, is presented to our readers this month. It was made from a cabinet portrait in our possession by the CROSSCUP & WEST WOOD AND PHOTO-ENGRAVING CO., by means of the newly invented phototypographic process of Mr. FRED. E. IVES, with which our readers have been already made familiar. This method is most wonderful, and secures such life-like results as are before us, entirely by photographic means, without one bit of engraving by hand. It is bound to work a revolution in portrait engraving.

ITEMS OF NEWS.—Messrs. STODDART & Co., Atlanta, Ga., have the exclusive privilege of photographing the "International Cotton Exposition" to open in that city October 5th. Mr. M. J. RUST, Hastings, Minn., left photography thirteen years ago, and was a subscriber to our magazine then. Now he writes: "Having re-opened, I want your reliable journal," *and he gets it*. Mr. W. E. HICKCOX, editor of the *American Shorthand Writer*, called upon us recently. He is about to make Boston his headquarters. Our French *confreres* are soliciting subscriptions for the erection of a monument to Daguerre. Send to Mons. N. GLAISE, 55 Boulevard Beau Marchais, Paris, France. What a cruel thing for our friend FITZGIBBON, of the St. Louis *Practical*, to tantalize us by announcing that we anticipate a journey to Palestine and the Jordan. *He* knows full well that our profits are too small to afford such a glorious, good journey. The Trenton, N. J., *Herald* reviews the photographs of Mr. GEORGE PINE of that city, which were exhibited at the New York "Show," in the highest terms. Mr. CHARLES E. EMERY, Silver Cliff, Colorado, receives a very complimentary notice of his skill and enterprise from a local paper. Business prospects are good all over the country. In our next number we shall issue a picture giving twenty-five entirely new suggestions for the posing of the human figure,—all possible, but some of them difficult and original.

THE Exhibition and Convention Report is finished in this issue. To secure room for it all we are obliged to defer our comments upon the whole until next month. Perhaps it is just as well for us to think calmly over it another month before expressing any opinion, for we confess now to not a little disappointment; and, if we spoke now, would perhaps say, "I told you so."

MOSAICS, 1882, is under way. All are invited to contribute to its pages, and all who do, receive a bound author's copy free.

A LARGE and commodious establishment is now in running order in Chicago for the manufacture of the "Beebe Plate," and its ability is exercised to the fullest extent. There seems to be a tremendous "boom" for emulsion plates. In a private letter to us, Mr. BEEBE says: "Do all you can to induce the fraternity to adopt the dipping bath method of development for the oxalate-developer." We certainly commend this means as most satisfactory.

MR. JOHN R. CLEMONS made a fine display of enlargements at the New York Exhibition on his Matt Surface Paper, which is the best in existence for solar work, he claims.

A DAILY PHOTOGRAPHIC JOURNAL.—The editor of the *Photographic Times* and *American Photographer*, Mr. J. TRAILL TAYLOR, pats himself on the head for having "for the first time in the history of the world solved the problem of issuing a daily photographic journal." Not so fast, our brother. Those who attended upon the first National Photographic Association Convention, held in Philadelphia in 1871, will remember that *we* were the "*first*" to "solve" the aforesaid "problem" by issuing the *Photographic Record* "daily" during the whole of the Convention.

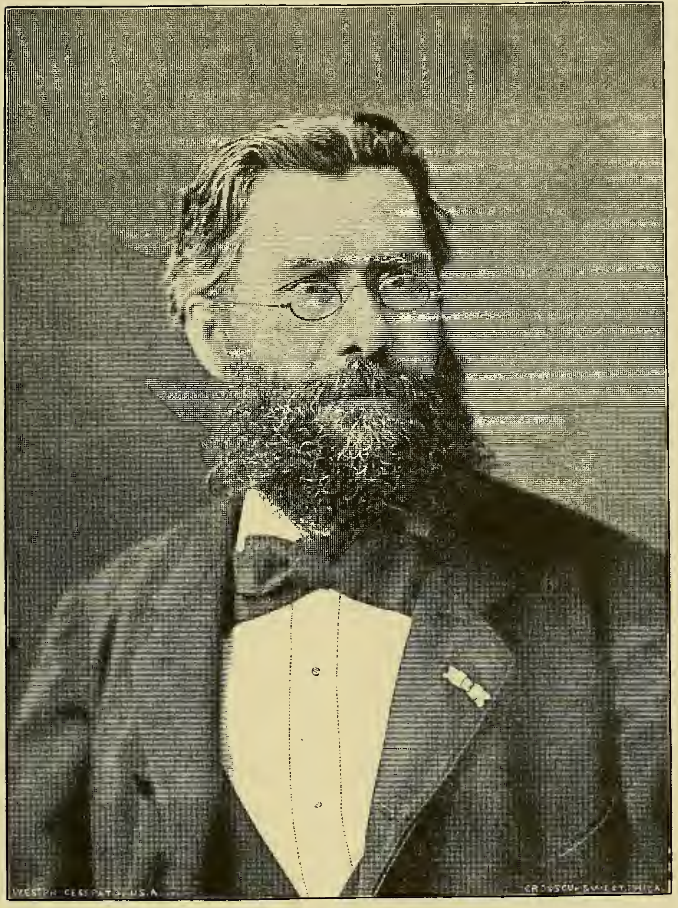
MR. T. W. PATTISON, of Chicago, in the September *Times*, gives the New York photographers a good drubbing for the lack of hospitality shown "the West," etc., during the late Convention. Well—what did we tell you at the last Chicago Convention? Did not we oppose going to New York with all our might and main, and "ring"? And yet you *would go* to New York, to be snubbed and overlooked and ignored and *get*—no boat-ride.

THE largest catalogue of photographic goods, frames, mouldings, etc., used by photographers ever issued, has just come to us from Mr. HIRAM J. THOMPSON, 259 Wabash Avenue, Chicago, Ill. It is an immense surprise. Listen to some of the figures claimed for it. It is 9 x 12 inches; it contains one thousand illustrations, valued at nearly $5000. Six tons—three hundred reams—of paper and three hundred pounds of ink were used in printing the edition, which, pasted together, would make a strip twelve inches wide and over three hundred miles long. It is certainly ahead of anything of its kind ever issued in the world. It contains one hundred and twenty-eight pages, and is handsomely printed on fine white paper. The first illustration is a fine photo-engraving of Mr. THOMPSON himself, who has now been twenty-two years in the business. Surely such a convenient, extensive, and elaborately illustrated catalogue will make buyers exceedingly happy, and render the selection and purchase of their goods an easy matter. Our copy is bound in cloth, gilt; our journalistic cognomen in gilt on the cover. The whole grand affair is largely due to the skill and talent of Mr. T. W. PATTISON, the well-known and able manager of the photographic department.

OBITUARY.—We regret to learn that another of our veteran photographers has passed away. Mr. W. N. HOBBS, of Exeter, N. H., died August 16th, suddenly, unexpectedly. Mr. HOBBS was in business in Exeter for eighteen years, and had won the name of the "veteran" photographer. Philips' Exeter Academy, the best fitting school for Harvard, is located here, and his work for the students has gone all over the country. He was about fifty-one years of age. Mrs. HOBBS writes us: "We were to start for the Convention at New York, but he died the day we were start (August 16th). Very suddenly, only sick five days. He has been a constant reader of the *Philadelphia Photographer*." It will be seen by the advertisement in Specialties that Mr. HOBBS' business is for sale, and we believe it is a good opportunity.

A SPLENDID OPPORTUNITY.—We regret to learn from our old friend, Mr. HENRY ROCHER, the renowned Chicago photo-artist, that owing to continued ill-health, he contemplates retiring from the fascinations of our art to private life. He has long contemplated this step, and now authorizes us to make it public. Every one knows that the very best work made in America has for years emanated from Mr. ROCHER'S studio. That studio, with all its rich advantages and accoutrements, is now for sale. Mr. ROCHER assures us that the business, at the present time, is the best located, the best conducted, and the best paying one that any party could wish to possess. There are over twenty thousand private negatives from which duplicate orders paying $4000 to $5000 yearly are received; also some two thousand negatives of celebrities having a rapid demand for their product. For two or three men with the necessary capital and energy there is a fine chance here for investment. Further particulars can be had on application to Mr. ROCHER, 77, 79, and 81 State Street, Chicago.

SOCIETY GOSSIP.—The only local Society meeting held in September was at Chicago. We have the minutes in type, giving the experiences of the members who attended the New York Convention, but we are obliged to lay them over until our next. They are rich enough to keep.

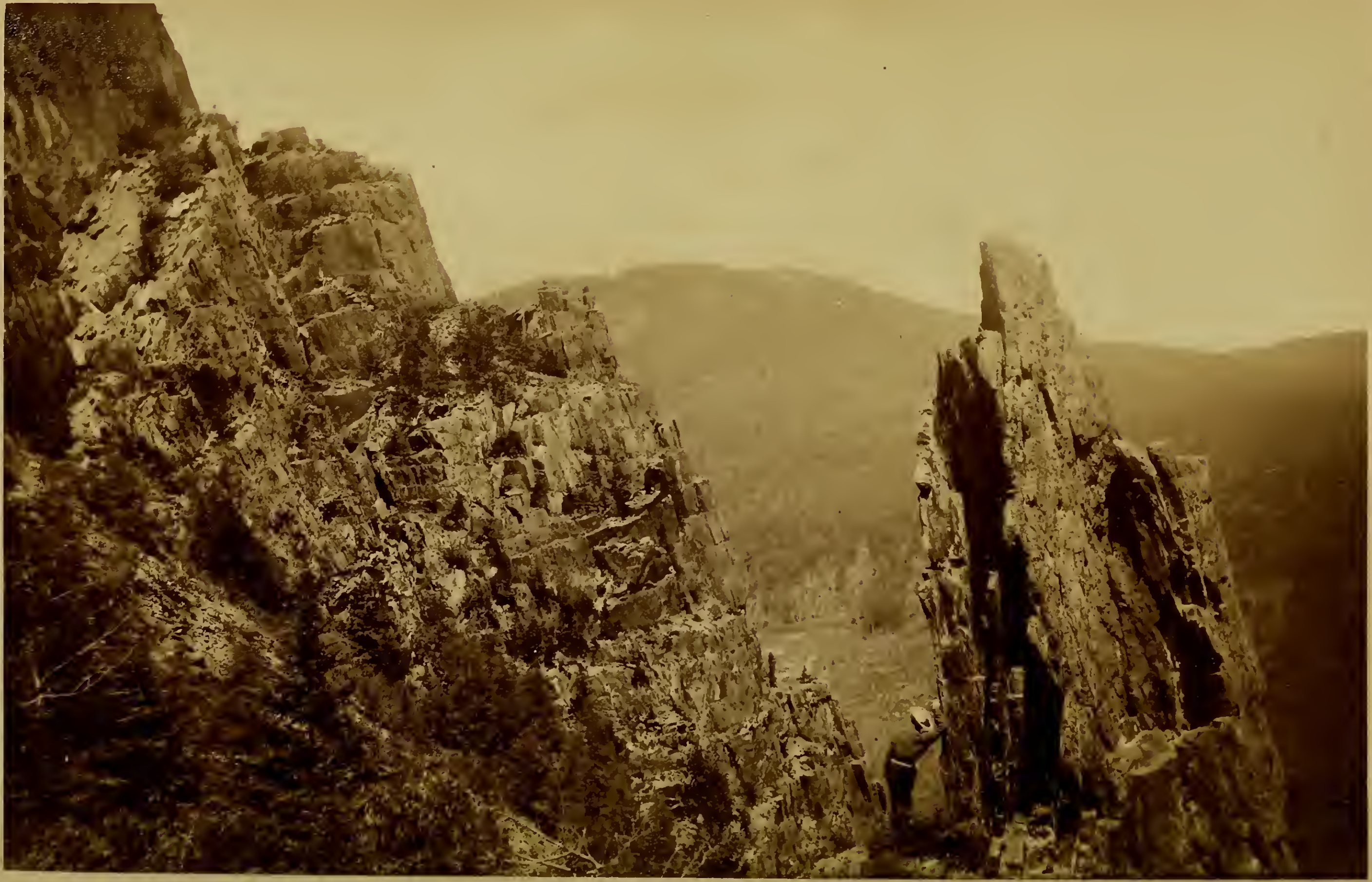


Boston Public Library.

LEON VIDAL,

EDITOR OF THE PARIS MONITEUR DE LA PHOTOGRAPHIE.

Engraved by the IVES' (NEW) METHOD OF PHOTO ENGRAVING, (Patented Feb. 8, 1880.)
Crosscup & West, 702 Chestnut Street, Philad'a, Pa.



EDWARD L. WILSON. PHILADELPHIA.

CIRCE AND THE GLORIETTE,

DIXVILLE NOTCH, N. H.

Boston Public Library.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. NOVEMBER, 1881. No. 215.

OUR PICTURE.

It is just a year ago since we gave our readers a specimen of our own bromo-gelatin work in the shape of a view of Dixville Notch, N. H., and when we were making the negatives we discovered a point which seemed to us the ruggedest and wildest and most ungetatable of anything we had seen there, besides being decidedly picturesque. We returned to it afterwards and "tried some plates on it," but, alas! when developing them at home, we found we had trusted too implicitly to the protestations of a would-be dry-plate producer, for our negatives were full of such insensitive spots as rendered them far less attractive as pictures than photographs of a leopard-skin.

Not to be beaten by any such trifle as that, we returned to our pet this summer, made another declaration of love, and came off victorious. But not without difficulty. Last year the tender tripod used was too frail to withstand the hard knocks of such a scramble, and moreover it was too low, since in the confusion of rocks on the field of battle it was impossible for us to find a spot sufficiently large on the same level to give room to us and our tripod. The latter must be placed below us. We therefore employed one of the American Optical Co's. eight feet long tripods and a pair of stout legs belonging to the young collegian who appears in the picture, and whose life has been of interest to us since they began to carry him. After a rough scramble up and over the bare incline of the mountain, nearly one thousand feet, dodging the shorter needles and meandering in and out and among the larger ones as through the streets of a ruined city, we arrived at the chosen point of sight with our apparatus and six double holders "loaded" with Carbutt's Keystone plates, enclosed in an outside case. This last was confided to the care of the levellest rock we could find, while we proceeded to arrange the camera for the capture. Immediately the black-flies began to attack us, and a "smudge" must be made to disgust them before any photography could be done. The light would remain good and there was plenty of time. Turning to forage for moss and wood to make the smudge, we touched the stone which held our box, and the spiteful thing retaliated by pitching its precious burden out far into the air beyond our reach. Over and over it went! Never did the waters of Niagara go with more vim or describe more beauteous curves. Never did the "Laughing Water" of Minnehaha spring with more joyous glee. Never did *any* water ever come to a diaphragm with a more ignominious dash and crash and smash than did our poor box with its precious contents after subtending the last possible angle, when striking the forty-third and last rock. The outside case flew into thirteen pieces and hundreds of splinters, and its secrets were all then and there revealed. Amazed and spell-bound we stood, too surprised to collect our senses, for the whole catastrophe transpired in less time than we can describe it.

With a pitying heart, and whistling "Good-by, sweetheart, good-by," we clambered down to the wreck to see if there was anything living,—any thing to bring us salvage for our pains. Each holder was taken up in turn, and with beating heart and bated breath the fate thereof was tested by first one ear and then the other. Our sympathizing son shared our anxiety until we could say, "All right, Fred! Only one plate out of twelve broken, and we shall get our negatives for the magazine yet." And it was even so, and Mr. Carbutt can add one more good quality to the long list possessed by his plates, *i. e.*, the ability to climb mountains and to tumble down them without any great damage.

We returned to our camera, made six exposures upon those acrobatic plates, and on reaching home nearly a month after we developed from them six pictures, as uniform in quality as any we ever saw. The exposures were made with a *Morrison* 10 *inch* wide angle lens, using next to the smallest stop, 45 seconds exposure on a cloudy day, and on the ordinary (not extra-rapid) plates. Our camera was made for us by the American Optical Co., 5 x 8 size, and since then was broken all to pieces by a tumble down a cliff about a mile from the view before you —a more heart-breaking (too) calamity than the first, for we lost a view which must now be our subject next year, and we must return then to get it for you.

Circe and the Gloriette are of the hundreds of picturesque bits found in Dixville Notch, N. H., and we have chosen these names to please our fancy. "Circe" is the great rock-needle on the right, which stands far above its companions, high above the mountain's incline, amid a great quantity of smaller ones, and reminding us always of the well-known picture of "Circe and the Companions of Ulysses," so familiar to you all as representing a young goddess surrounded by a lot of hogs, whom she had transformed from men, whose upturned noses are lifted towards her,—a pretty fancy drawn from the descriptions of the Odyssey. "The Gloriette" is the great peak on the left, only the hard shoulder of which is seen. We thought it was a pretty rock study and made it serve our purpose.

We extract a few notes from some descriptions published from our pen last summer with an engraving from one of our photographs, in the world-renowned, fashionable *White Mountain Echo*, so ably edited by Markinfield Addey, Esq., at Bethlehem, N. H., in order that the view may perhaps be better understood:

"Come first to the summit of the Gloriette. True, it is 2450 feet above the sea-level, but less than 900 feet of actual climbing is required to reach it. The 'path' may be traced from the base to the summit, so bare and rocky is the route, and as is the case with some of the Alps, the climber may be seen and hailed from base or summit nearly every foot of the way. No Alpenstock is needed, for sometimes 'all fours' are required, and then it would be in the way. Gloves are also an unnecessary article. The journey is easiest handled without. As the ascent is made, on both sides of the rocky stairway the eyes are attracted by the wonderful beauties which blossom in every direction. A short climb brings the Dix House in full view, looking like a white speck amidst the green pastoral surrounding it. A look back, and the mysteries of the Sanguinari are revealed. On the right, a vast rocky incline presents itself, seemingly like a rusted, petrified glacier caught during one of its most frantic tumbles. On the left, curious needles and spires bristle countlessly about you, in clusters, or else isolated, of graceful forms, but more suggestive if seen from above. So we clamber on, and soon the great Notch opens up before us, inconceivably, grandly beautiful, here and there its sides clad with the richest foliage, varied by the spires and columns which shoot up far above as though still asserting a glorious lineage,—examples of decayed, departed power.

"Now the hardest pull of all, up a slide whence all the helpful rocks have been hurled by the Storm-King, and we are nearly on a level with the highest point of the Table-Rock or Gloriette. But, before we begin sight-seeing there—as when at the

Vatican we first enter the Sistine Chapel in order to recover the equilibrium of our brains before taxing them with the overwhelming glories of the stanzes of Raphael—let us take the little wooded pathway to the left, along the very verge of the cliff, and in a few moments we see the snow, pure, white, never ending, as it lies hidden in a yawning fissure close at hand. An impromptu snow-ball fight may be had here at any time—a novelty in this country on a hot day, as well as a great pleasure.

"But drop play, and come over to the Gloriette, for the sterner business of sight-seeing. You who have stood upon the Gloriette at Vienna, will not expect any 'Beautiful Blue Danube' dancing at your feet, with Strauss as leader; nor will you see the glories of a vast city or populous plains of an Austrian valley; but sights ten times more suggestive will loom up before you and below you. Careful, now, for this 'table' is only the breadth of an elephant's back, and there is nothing to hold on to but a few stunted pines, and a pole which has been driven into one of the rock-crevices. Make fast to the latter with the right arm, secure, and look down the precipice to the left. What glorious scenes are now presented! Enough to repay for the climb a dozen times. The great expanse of land, verdure-clad, with the meandering Mohawk creeping through its centre, the view clear all the way to Colebrook, and taking in the whole of the mountain Monadnock.

"Down within hailing distance we can see the people on the piazza of the Hotel Dix, which, with all its natural accessories of vale and stream, and the lofty tri-cliffs of Palmageni serving as an appropriate background, seems like a mere speck. But at our feet the view is more classic in appearance. The grand, gray cliffs reach up towards us, isolated and alone upon the great hill-top, and that sacred scene in Athens—the ruins of the Acropolis—is brought to mind, though here the massive structures look even ten times more aged and more wonderful. The Areopagus is not hard to recognize, and where 'Paul stood in the midst of Mars Hill,' can readily be imagined, if not actually located. Like a listening crowd of 'ye men of Athens,' the groups of minor spires lift up their heads in countless numbers, as different in form and figure as the 'men' themselves.

"Now, a view across the Notch, and you see the whole Sanguinari range flattened somewhat by the inferior height, yet reminding one of a group of pyramids in an Egyptian sandy plain, their outer casing gone, their once geometrical proportions destroyed by the covetous Helios, assisted by the pry of his willing vassal the Ice King. It is a grand sight, never to be forgotten. Spread out on the right is the vast, rocky incline, up which we clambered an hour ago, for all the world possessing every element of a Swiss glacier, except the ice masses, which are here represented by the rusty rocks in confusion, resembling also one of the sides of Mount Washington, but far more picturesque, because varied in color, and relieved here and there by lovely foliage. Again, the rock formations, being mica-slate instead of granite, are more beautiful and varied in shape. To this last is also due the most fascinating scene of all, the vast group of needles and spires which lies hugged close, *close* between the Gloriette and the Old King. I never saw anything like them in Nature. I can only compare them with the view from a height of the grand old Mosque of Sultan Hassan with its neighbors in Cairo, the added centuries, and all the wear and tear of them, thrown in. How like the description in Lord Houghton's poem of 'The Mosque' it must have been before the elements rusted and racked its glories half away:

"'A simple, unpartitioned room,—
Surmounted by an ample dome,
Or, in some lands that favored lie,
With centre open to the sky,
But roofed with arched cloisters round,
That mark the consecrated bound,
And shade the niche to Mekkeh turned,
By which two massive lights are burned:
With pulpit whence the sacred word
Expounded on great days is heard:
With fountains fresh, where, ere they pray,
Men wash the soil of Earth away;
With shining minaret, thin and high,
From whose fine trellised balcony,
Announcement of the hours of prayer
Is uttered to the silent air.
Such is the Mosque—'

"Such is the scene suggested here to the comparing mind, and 'such' are the glories which here abound. But I must not tire you with these details, for the greatest amount of 'fine writing' would not do fairness to the thing. I have spent many happy, wistful days here trying to cajole some of the prettier 'bits' to impress themselves upon my sensitive photograph plates, but that job, too, is an endless one. The lover of the beautiful and the healthful will find no end of fine things to delight him."

Much as we love photography, we must always feel our own weakness and inability to make it show up all we feel about these lovely places. Our prints were made in the usual way on the "*Peerless*" Albumen Paper, manufactured by Mr. A. M. Brown, Rochester, N. Y. We have also used this paper for portraits, and find it excellent in every respect; prints uniformly and easily, tones beautifully, retains its surface and brilliancy perfectly, and is easy to work. It is the newest brand of paper, and is assuredly entitled to its *nom de plume—Peerless.*

Mr. Brown kindly supplies us with the following formulæ for working his Peerless Albumen Paper: Dissolve nitrate of silver in water until the hydrometer indicates fifty grains to the ounce. To forty ounces of this solution add twenty-five drops of aqua ammonia; stir well, and add nitric acid until the reaction is slightly acid, or, better still, neutral. Sun and filter. The bath is now ready for use.

The sensitizing-room at sixty degrees Fahrenheit. The time of silvering (in rain water thirty-five seconds) will be one minute, and the fuming ten. If the prints come from the printing-presses too red, a little more fuming is necessary.

The first washing for prints before toning should be made slightly acid with acetic acid, and then the prints have five more changes in plain water.

Stock Solution for Toning Bath.—No. 1. Saturated solution carbonate soda (commonly called sal soda). No. 2. Fifteen grains double chloride gold and sodium, dissolved in seven and one-half ounces water. Add one drachm of No. 1 solution to ten ounces of tepid water. Now add one-half ounce of No. 2 solution, and the bath is ready for toning.

Fixing Solution.—Use two ounces hyposulphite of soda to twenty ounces water. This should be mixed twenty-four hours before using. When the prints are fixed, immerse in a strong solution of salt and water.

N. B.—It is a common error to suppose a weak bath is more economical than a strong one. Observe the detail in the shadows and the purity of the high-lights.

A PAGE FROM EXPERIENCE.

MOTTO:

"EXPEDIENTS OVERCOME DIFFICULTIES."

LAST winter I was working a two-gallon negative bath, or in fact two such baths. I neglected to record the dates, but I think the last of February nearly correct; both baths were doing me satisfactory service, when one day I noticed that the dipper and sides of the glass-holder of one of them were becoming whitened, as though metallic silver was being deposited on all the interior surfaces, which, indeed, afterwards proved to be the fact; but as the bath continued to give excellent results my curiosity was not sufficiently aroused to lead to investigation. A few days of observation, however, moved in me the "parent" passion, and I discovered in the bottom of the bath a fragment of a 4¼ x 5½ ferro. plate, to which was attached the larger portion of about one ounce of metallic precipitate of silver, which I removed, but as the bath had remained faithful, I concluded to trust it to a conclusion, which finally came in the regular way, too much alcohol in the bath, giving yet good clean negatives and positives with care and precaution in development usual with baths overcharged with solvents. I then siphoned the bath into a bottle; it presented a pale, reddish tint. I knew that for every equivalent silver in metallic precipitate I had taken from the bath an equivalent of iron-nitrate had taken its place. What was to be done? I was indisposed to send so "fat a take" to the refiner. It soon occurred to me that if I could reduce the iron-nitrate to oxide of iron I could filter it out. I emptied the bath into an evaporating dish and applied the heat of an oil stove; by the time the solution had reached a boiling temperature it was muddy with red oxide of iron. I continued the evaporation to dryness and attempted to fuse the silver, increasing the heat and stirring the dry mass until the temperature must have been considerably above that necessary to fuse pure silver nitrate, and at which point the heat was retained about half an hour. The infusible oxide of iron would not separate from the silver, and the usual phenomena of fusion did not occur, but I judged all the iron to be reduced, which the sequel proved to be correct. So after cooling, I added to the dry mass, which had the appearance of coarse-grained crocus, or rough, water from melted ice in quantity about the same as contained before evaporation; it was intensely muddy, and required nearly all day to filter through two filters, each portion into a separate bottle. It filtered clear as crystal, but one filter was set closer than the other, and both bottles were set to sun, that from the closest set filter remained entirely clear, whilst the other suffered a slight discolorization which precipitated in about two hours. I next filtered the two solutions into a bottle large enough to hold a full bath and added new silver solution sufficient to fill the holder. I emptied it into the holder, and it yielded that day good, clear results, but by the next day it fogged badly, and I found it necessary to add forty drops of C. P. nitric acid to restore it to good condition. Twice afterwards I found it necessary to repeat the dose in less quantity, but now it has for some weeks yielded rapid and faultless plates, with the prospect of a few weeks' further service before giving out; the companion bath, holding somewhat less than two gallons, has just received, in the meantime, its second recuperation. In removing the iron from the contaminated bath, it is safe to say I did not lose a scruple of silver. I do not know how the ferro. plate became lost in the bath, but suppose it must have fallen out of the dipper sometime unnoticed, leaving me to suppose I had forgotten to coat my plate, which was repeated, and the lost plate left to develop its presence as described above. Hoping that this narrative may be interesting to some readers, it is to them respectfully submitted.

F. M. Spencer.

Mansfield, Pa.

ALUM IN THE WRONG PLACE.

In looking through your *Mosaics* for 1881, I find on page 77 the following formula "to prevent prints blistering."

Alum, ...	1 ounce.
Water, ...	40 ounces.

About six years ago this formula was published in your journal. I tried it, and was charmed with the result, as it cured the blisters, and I thought gave more brilliancy to my prints. I continued to work it for more than a year, and every print made during that time has faded, one of which I enclose, which was returned to me a few days ago. I sometimes think I will never hear the last of the alum. It has proven a very dear formula to me, having duplicated thousands of the prints without charge. I hope you will call the attention of the fraternity to said article, and warn them lest they fall in the same trap as myself. I think if the author will look at his prints a few months old he will find them going as the one enclosed.

I did not attribute the trouble to the alum, because our mutual friend J. R. Clemons, of your city, was claiming alum as an eliminator of hypo, and Mr. Anthony had received the Association medal for the use of alum in the silver bath; therefore I continued using it until August, 1876. While in your city I showed my faded prints to Mr. Clemons, who opened my eyes as to the trouble. He said, "You use the alum in the wrong place." I should have used it after fixing, not before. I stopped its use, and have had no trouble since. I have never tried it after fixing, for I am afraid of it in any way.

C. W. M.

Wilson's *Photographics*. — Nearly one thousand copies of this new manual of photography have been sold, and the orders still come, and good words for it follow from the buyers. $4.00, by mail.

PILSNER BEER IN THE LICHTDRUCK PROCESS.

WE give you herewith a receipt used by the best lichtdruck establishments of Germany and Austria, which never has appeared in print before.

1. Well cleaned plates are moistened with the following filtered mixture: One part potassa water-glass; 11 parts pilsner beer. When all the plates have been moistened, they are warmed somewhat, and let alone until the next morning, when they are again warmed a little, washed, dried, warmed again, and prepared with the second layer.

2. *a*, 25 grammes gelatin are washed in water and soaked. *b*, In 200 grammes distilled water three-fourths of a gramme of chrome-alum is dissolved, the soaked gelatin added thereto, and the whole warmed at 40° R. When the gelatin has become entirely dissolved, the well-pounded chrome salts are added, viz., 2½ grammes bichromate of potash, and 2½ grammes bichromate of ammonia. The mixture is well filtered, and poured on the plates prepared with the layer 1. Dry at 40° R.

3. Etch.:

Glycerin,	500	grammes.
Ammonia,	50	"
Hyposulphite of Soda,	12	"
Water,	250	"

4. Solution of spirit of verdigris and gelatin, for drawing off the negatives:

Gelatin,	36	grammes.
Spirit of Verdigris,	100	"
Glycerin,	6 to 8	"

The solution remains in liquid form even after it becomes cold, and the negatives can be coated with it when cold.—*Photo. Notizen.*

A German friend to whom we communicated the above, says:

"You photographers may use pilsner beer for such a degrading purpose as moistening a plate, and I feel sad in consequence, for your humble servant knows a better use for that highly respectable and venerable beverage, than to bring it in contact with such a low and disgusting fellow as hyposulphite of soda no doubt is."

WHAT IS GOOD FOR THE TRUE PHOTOGRAPHER.

WE know of no class of men as a fraternity, who deserve more credit for being what they are, and as *much* as they are, than do photographers.

Every year, at our Conventions, members of our craft come to us time and again and express their delight that they are able to find "so many good fellows who are photographers." They had humbly fallen into the public tide of opinion, and believed that nearly all photographers, except themselves, were of low caste—mere mechanics, and unworthy of little more than sheer toleration, while doing the work required of them. At one time, such an opinion was a just one, but that day is over. The photographer of to-day is a "good fellow" personally; he is ambitious to secure the best results; he reads; he experiments; he thinks; he is diligent about his business; he is enterprising; he is bound to excel, and he does excel as a rule beyond his expectations. What he most needs now, and he will get it if he holds on and continues to deserve it, is a better appreciation of his efforts. Hundreds of our best workers have to suffer for the want of this. They invariably do their best and do well, and yet have a hard time to get along. We know that this want of appreciation is their greatest drawback—the source of all their discouragement. But it won't last. There is a good time coming, and if you can keep up you can and will share it. This point is brought to your minds now, because sometimes we are hurt, and know not the cause of our suffering.

Mr. John Ruskin, one of the most extraordinarily vital minds among the living generation, and the well-known art critic, uses, in a letter written during Turner's lifetime, concerning the popular disparagement of that painter as an artist, language susceptible of various applications. He says: "Let us not think that our unworthiness has no effect on the work of the master. I could be patient if I thought that *no* effect was wrought on his noble mind by the cry of the populace; but, scorn it as he may, and does, it is yet impossible for any human mind to hold on its course with the same energy and life, through the oppression of a perpetual hissing, as when it is cheered on by the quick sympathy of its fellow-men." And the *Sunday-School Times*, a teachers' journal, further remarks on this score: "What Mr. Ruskin here says of a particular case, is true generally. A teacher cannot teach the most successfully without the support and cheer of answering intelligence on the part of his pupils. He simply *cannot*, with all his effort, open himself in such an outflow of giving as would be possible if they held themselves toward him in an attitude of frank and hospitable receiving. But this kind of influence is reciprocal. The teacher, too, has his duty of providing a genial and generous atmosphere of appreciation, in which his pupils may fruitfully work. So on through the whole circle of various mutual relations. Let us appreciate more—not less wisely, but with a wiser generosity." These last thoughts are for us all to take to our own hearts, for our own good.

We have often been criticised for our remarks upon "pictures received," in our editorial columns, which, we have been told, are oftentimes "too lavish." Well,—never. We claim to be in better position than any of our critics to know who deserves praise. We know a great many of our readers personally, and all about their circumstances, and the struggle they have to get along. We have visited many a gallery in our rambles without being known—*incognito*—and have the greatest sympathy with those who have to battle the hardest to keep up. We know of great heroes in our art. Can the few feeble words of praise we give them do them, or any one else, any harm? It will soon be twenty years since we began to teach the fraternity through our magazine, and through the tens of thousands of letters we have answered in those long years, and we are just fool enough yet to say that we have been supported in this hard work largely by the kind words which come back to us continually from those who understand our motives, and are graceful and good-hearted enough to say so. Indeed, we think we should have dropped the work long ago but for the good words that have salted and seasoned the labor largely of love; and, we believe, many photographers are similarly constituted.

MR. IVES' PROCESS.

On this subject Mr. Ives writes as follows: "The correspondent of the St. Louis *Practical Photographer*, whose criticism of my process you quote, made not one only, but *several* blunders. If you think it worth while, you may call the attention of your readers to the following facts: 1st. The closeness of the lines in my process is not fixed at 100 to the inch, and I never said that it was. They can be adjusted to suit the work much easier than by Mr. Petit's process. 2d. The details in Mr. Petit's work, except when it is very coarse, are *not* 'good enough to suit the most exacting.' 3d. It is not possible to produce any kind of an effect by Mr. Petit's process which I cannot produce better, quicker, and cheaper by my own. 4th. There can be no 'large field open' for Mr. Petit's process, not only because it cannot be made to produce work at low prices, but because it is unreliable, and even at its best will not do good enough work to command high prices."

Respectfully yours,
Fred. E. Ives.

SOFTENING OF THE ALBUMEN.

Interesting Correspondence.

———, September 16th, 1881.

John R. Clemons,
915 Sansom St., Philadelphia.

Dear Sir: I, to-day, send you some paper I received from you some time ago. I tried hard to work it, but cannot; it has caused me considerable loss, disappointment, and vexation. After toning and fixing it becomes soft, so that you could wipe the whole picture off with your finger. I presume the trouble is in the albumen.

Please send me other good paper in place of this, and about $3.00 worth more.

Truly yours, ———.

Answer.

Philadelphia, September 19th, 1881.

Mr. ———.

Dear Sir: The paper was received in advance of postal. You say that you tried hard to work it, and met nothing but disappointment and vexation, as the albumen became soft and rubbed off with your finger, and you lay the blame to the *albumen paper*. But let me say in a friendly way that the fault is with yourself. You evidently ran afoul of a snag that you have never seen in all of your vast experience as an operator, printer, and toner.

Let me explain: The paper is highly albumenized, and in the second place your silver is very strong; you have floated too short a time upon your silver solution. So, when the silver is at fifty to sixty grains strong, the surface of the albumen is not *coagulated*, and the short floating don't allow it to penetrate far enough to coagulate the albumen to its greatest depth. Then when you wash the prints the water softens up the uncoagulated or semi-coagulated albumen, and then you tone in an alkaline, and perhaps only in a *very* alkaline toning-bath, which further dissolves the semi-coagulated albumen, and then after that it is introduced in the alkaline hyposulphite bath, and it gets a thorough finish if the print is not moved from the paper in the toning-bath.

I return some of the same paper that you have had so much trouble with, so that you can test the above, and be convinced that I am right.

I sent a copy of the above to the *Philadelphia Photographer* to be published, as it will be, no doubt, a great benefit to a number of photographers throughout the country who have your trouble.

Respectfully yours,

John R. Clemons.

WILSON'S PHOTOGRAPHICS IN AUSTRIA.

The *Photographische Correspondenz*, in speaking of Wilson's *Photographics* in its August number, says:

"That indefatigable promoter of photography in America, Mr. Edward L. Wilson, has given the English-speaking part of the craft an excellent compendium in his book. The whole material is collected under the following chapters or dissertations, upon the basis of exhaustive literary studies [here follows the enumeration of the different chapters.]

"As the reader will see from this short review, all the branches are thoroughly represented, although the portraiture branch receives special attention.

"The arrangement of the lectures is original, as the author, in laying down the principles of the art, sustains them at the same time by pertinent quotations from the publications of many authors (two hundred and forty-four of all nations which publish their works in one of the three dominant languages).

"The work is written with great elegance and masterly handling of the subject, being very comprehensible and magnificently got up; and we strongly recommend it to all who are enabled to read it by being sufficiently acquainted with the English language.

"The author, who has so repeatedly sacrificed much of his time and money to the furtherance of photography, will certainly meet well-merited success in England and America, where not alone amateurs, but also professional photographers, seek and find instruction in the literature of the craft."—Dr. E. Horning, *Editor*.

COLORADO AMID THE CLOUDS.

BY WILLIAM H. RAU.

(Continued from page 314.)

Perhaps a few remarks about the United States signal station would not come amiss. While here on the summit, I learned from Mr. F. L. Jones, of the signal service, the following points: The summit proper includes 12 acres, being 2350 feet above timber line and 2¾ miles from it. The building is 20 by 30 feet square and 15 feet high, walls 3 feet thick, cemented with the heaviest possible stones, roof covered with zinc and canvas. The provisions, wood, etc., for the following year, are packed up in September of each year on burros. The wood is brought from the nearest accessible point, two miles. A pack of four burros bring up a cord of wood each day when at work, making two trips a day. There are three men here on duty. In the summer they each stay about two weeks at a time, and in the winter at least a month, on all occasions alone, except when the mail is carried in by one of the men at the lower office (Colorado Springs), then this carrier spends the night on the summit with the isolated chap, and returns the next day. Already the snow has disappeared except in the crevices and abysses in the crater, where it remains all the year round. The water supply is maintained by the snows of winter, and about the time it melts from immediately around them, they have the summer snowy season, or hail, which falls almost every day, for about an hour at a time, which immediately melts and fills up the places they have dug near by, and runs throughout the summer. Possibly one can form some idea how difficult the trips are made in winter each week by the ones at Colorado Springs for the weekly mails that are sent to Washington, and also for repairing the line; often taking two days to go up, having to walk through the deep snow and high winds, to say nothing of the intensely cold weather. Barometer stands here about 17½ inches, while at sea-level it is 30 inches. Many animals, such as foxes, bears, and cougars, are occasionally seen about the station at night, after the refuse that had been thrown outside of the building.

Close by the station is a grave (?), with a headboard informing the stranger that Erin O'Keefe had been devoured by mountain rats. Many think this is a hoax of O'Keefe's, one of the signal-men. So much for a description of the summit, but certain it is that the view it affords is one of the grandest on the North American continent. Sound travels at this elevation much faster than below, and it seems to require no effort at all to make one's self heard at a considerable distance. Pike's Peak was named after Gen. Zebulon M. Pike, who discovered it in 1806. Gold discoveries were reported at its base in 1858, immediately after which many prospectors went there. After getting a good rest, we celebrated the occasion of our visit with some champagne, brought up by one of our party, after which I got out my camera for a picture. Of course there was not much here to photograph, so we made several groups of our party, some on horseback and others on the rocks, seated. Here dry-plates came in very well, as it would have been troublesome to make good wet negatives, owing to the cold; so after exposing a few plates I was hurried to pack, so that we could start on the return at once, as it was now 2.30 P.M., and we must reach Manitou before dark,—so I packed and mounted. By this time all were ready and we started down, not quite as lively as we were coming up, but quite anxious to reach a warmer clime. This part of our trip was much the hardest, going down, down, down, being not only hard on the horses, but exceedingly tiresome for us, so many a time one or two would dismount and walk.

Nothing unusual occurred on our return, the party in descending were very much spread apart, so that after an hour's ride I found myself alone, coming down so until I reached the park, where I dismounted and awaited the rest; they were indeed a tired and played-out looking party, now only anxious to get to Manitou, which we reached at 7.45 P.M.; my horse went direct to his stable; here I was obliged to get assistance out of my saddle, so tired and sore was I. Still this was an event never to be forgotten by any of us, although they one and all emphatically declared never again to visit the summit of Pike's Peak.

I was much disappointed in not being able to make more negatives, but on returning found it was too late to make those I intended on the first part of the trail. I was in part repaid by making a number of negatives at Manitou and the Garden of the Gods next day, of which I may write you another time. On reaching Denver I developed my plates, about ten in all, and I did not have a single failure, unless the moving of nearly all hands on horseback can be so called, but the wind was so high that it was impossible to hold still.

We used the ferrous-oxalate developer exclusively. For a time we made all the oxalate we used, but found it no better than could be bought, and no cheaper. In making it we dissolved one pound of carbonate of potash in one gallon of warm water, then added oxalic acid until effervescence ceased, poured off, and let settle. For use, take of this solution ten ounces and one ounce of saturated solution of protosulphate of iron. We sometimes begin development with a developer a day (or sometimes a week) old, and scarcely ever use it all fresh, but add a little old to it, and it brings up the image beautifully, giving a good intensity. Should the image be too slow in coming up, then the plate has evidently been under-exposed, or may need fresh developer only, which can be used in a dish side by side with the one already in use. In exposing, we usually give about one-third that a wet would require, for the ordinary rapid, and about one-tenth for an extra-rapid plate, always timing for the shadows, especially out here where the light is so intense the shadows are very heavy. We have found the ordinary Platte River water cool enough, never having as yet used ice. Have not had a negative frill as yet this summer. When a negative needs strengthening after fixing, we use a strong solution of bichloride of mercury, leaving the plate in this in a dish until it is white; wash well and plunge into a pan of water with a little ammonia added, in proportion of one to fifteen. We invariably use alum after fixing to eliminate the soda and make sure of no frilling; this also hardens the film.

We for a time collodionized every plate before varnishing, but now only use a hard, good shellac varnish. The atmosphere is exceedingly dry in Colorado, and I think would be a paradise for gelatin-plate manufacturers. Silvered paper dries (now) thoroughly in ten minutes without heat; baths, I have been told by operators here, evaporate rapidly, so that it is almost impossible to keep a plate wet under the skylight without having it dry up in oyster-shell stains and streaks. One operator tells me he tried double quantity of alcohol, then ether, in his collodion, but it was the same. I give others' experience, as I have had none out here with the wet, we still using, as you know, gelatin plates exclusively. I have just started fixing my chemicals, intending to make some slides. We have tried many of the foremost plates in the market, and have found Carbutt's to be more uniform and reliable than the others. Mr. Jackson now has with him a large number, about three hundred, ranging from an 18x22 down to 5x8. There is no doubt that gelatin plates have superseded the wet in many cases throughout the West, where they are used much more than in the East, nearly every gallery having them on hand for babies and groups—one gallery in this city using them entirely some days, making negatives better under the circumstances than wet. To show how little gelatin is used in the East compared with the West, I received a letter a few days ago from a friend, operator in one of Philadelphia's leading galleries, asking me to tell him something about gelatin plates, as he hears so little or nothing of them.

BIBLIOGRAPHIC.

A Practical Treatise on Photoglypty, By Mr. Léon Vidal, Professor in the National School of Decorative Arts, Editor-in-Chief of the *Moniteur de la Photographie.* Paris: Gauthier Villars, 1881. One volume, pp. 216, illustrated by two photoglyptic prints and twenty-seven woodcuts, with a copious index and a list of the authors cited. Price, $3.00.

We have received a copy of this work from our esteemed and able contemporary, and from his preface learn the following of the plan and object of the treatise.

"There are now two distinct processes of photoglypty, both invented by Mr. Walter B. Woodbury. The first of these processes has become public property; the patent taken out in 1864 was sold to Messrs. Goupil & Co., for the whole of France. But about one dozen of licenses only were disposed of.

"The second process is of recent date; it has just been patented by Mr. Woodbury, and it is in order to give a full description of it that the publication of this work has been deferred.

"The first process we shall call photoglypty with the hydraulic press, and the second, photoglypty without the hydraulic press. Our object in describing these processes will not simply consist in giving a general idea of them, but to furnish such details that, our book in hand, and without the assistance of a teacher, it will be possible for any one to obtain the best results.

"After having described the two photoglyptic processes, we will indicate the numerous applications to which they are adapted.

"At the end of the work are some notes relating to the works of Messrs. Poitevin and Woodbury on helioplasty and photoglypty, forming a series of very interesting historical documents." The book is published in the French language, Mr. Woodbury's processes being largely employed in France.

HE WOULD A PROCESS-MONGER BE.

Below we give an example of the kind of letters which come to our desk from all quarters. Sometimes they seem to be almost epidemic. This one comes from an obscure town in the far Northwest, from a man not engaged practically in the art, but who has time to ponder how he may grow rich from the hard earnings of the photographic fraternity. Perhaps he attained all he knows about photography freely from others and from books. Now he thinks he has "invented" a "process," he never thinks to return a measure of what has been given him, but wants to "*sell* out." Shall we let him? His letter is accompanied by one card specimen that the remotest of our subscribers would be ashamed to own. And it was "made in ten seconds," we are told on its back, and "strengthened with pyro and citric acid and a few drops of silver!" Who would have a quick process, if the negative following its use has to be strengthened with anything? Surely our friend had better come out of the woods and visit a few galleries, and learn something before he sets up to do as he threatens in his letter. It might save him from a "quick" exposure to the street with the front stairs as an intensifier. His letter is not marked "confidential," so we give it, in mercy withholding his name and address, our purpose being only to change his mind and warn our readers of the awful sword that hangs over them. We advised him privately as above.

"Edward L. Wilson.

"Sir: Last winter I experimented a good deal in photography, and I discovered a process that is very simple, and I claim is very good. We can cut short the exposure of a sitting one-third on any formula, and produce a rich, delicate, soft negative without any extra outlay for chemicals or apparatus. I have been thinking something of getting my ideas patented.

"I write to you asking your advice concerning the matter. If it is patented, it will be some time before I can afford to see to it. I shall either have it patented or sell my idea to the photographic fraternity to the highest bidder. I claim all I have said for it—that I can shorten the exposure one-third, and I can produce a richer and more delicate negative, also the negatives have a softness that cannot be got in any other way I know of. It will work equally good in wet- and dry-plate photography, and it could not be any simpler. I have shown it to a friend of mine in photography, and he claims it does work faster than the old way. I inclose you a print that was taken by the process, with an old formula which I give you.

"*Negative Bath.*—45 grains to ounce of water, slightly acid, with nitric acid.

"*Collodion.*—

"Alcohol and Ether,	equal parts.
Iodide of Ammonium,	5 grains to ounce.
Bromide of Cadmium,	2½ " "
Iodide of Cadmium,	½ " "
Gun-Cotton,	6 " "

"*Developer.*—1 ounce protosulphate of iron to 16 ounces of water; 1 ounce acetic acid to 10 ounces of iron and water.

"The print I send you was taken from a negative, with an exposure of ten seconds, on a cloudy, dark day, and was strengthened with pyro and citric acid and a few drops of silver. The lens used was a two-thirds size, imitation Dallmeyer lens. I have also tried the 'Peerless,' 4 x 4, quick worker, with just as good results.

"Let me have your candid opinion upon the subject. I am aware you are death on process-mongers and all humbugs, but what I have told you is true as death.

"At present I am not working at photography, after awhile I will try and send you a few negatives.

"Hope to hear from you soon.

"SEPTEMBER 21ST, 1881."

Did one ever see such a display of egotism and ignorance?

THE P. A. OF A. CONVENTION.

THE New York Convention and Exhibition was a surprise to a great many, and a great disappointment to the majority of those who attended upon it.

To us it was neither. Last year we worked with all our might and main to secure interest in the new Society, and to do service at its birth; we attended with the intention of keeping our mouth shut, in obedience to the pervading opinion, that "no dealer should have a say in the proceedings." But when we saw such a folly proposed as drowning the Society at its second birthday in a great city like New York, we could not sit still without lifting our voice repeatedly against any such suicidal procedure. We were opposed, however, by "a ring," who seemed determined to make any sacrifice to get to New York.

Matters turned out as we predicted. The Association was *lost* in such a large place. The busy confreres of the great metropolis had no time or disposition to be bothered with visitors, and, although they opened their galleries at certain hours, they did not show the light of their countenances. They had a right to do exactly so. They never went "West" to share the hospitality there, and so did not feel bound to spend their time and money to fête "the West." We cannot see that they are to be blamed. Mr. Seavey did a great deal to demoralize them, but Mr. Seavey also did a great deal of useful work which no one knows of. Some of it was almost overlooked, notably the splendid opportunity given of seeing and showing work under the skylight. It is easy to find fault; it is *so* easy to be selfish and exacting, unreasonable and ungrateful. The real truth of the matter is, the Convention was only a partial success because it met in New York. There were too many diversions there—too much else to attract. New York is too big, too anti-photographic in its influences, to serve well as a meeting-place for one of our Conventions. We do not believe that the photographers there meant to snub or neglect any one. We do not believe that the majority of them care one whit for what Mr. Seavey did or did not do. They had their own affairs to attend to, and did not think the Convention was of sufficient importance to cause them to neglect their business.

The dealers knew full well that their stores were the best places to display their goods, and that everybody would come to see them. Moreover, they were told very plainly last year that they were not wanted, though since, the mistake was made of asking them for money to help pay expenses which the dues of the membership, if promptly paid, would be ample to meet. In face of all this, the very hardest worker for the success of the affair was a stockdealer. He went home disappointed and abashed, because his noble efforts did not meet with a greater encouragement. The whole affair was *one grand neglected opportunity*, and it was all because New York had too many outside attractions, and humanity beat photography out and out.

Our brother Fitzgibbon, of the St. Louis *Practical*, tears himself to pieces, and commits hari-kari in his leading article, October issue, and calls the Convention a "great agony." He feels hurt because "the West" was, in his opinion, "snubbed" by "the East." We do not believe in this "cranky" hallucination at all. The principal work done *at* the Convention—the addresses, etc., —was by Eastern men, according to his own geography. Yes, he thinks the Eastern photographers turned their backs upon the P. A. of A. because it was born in "the West," and Brother Taylor, of the *Photographic Times*, thinks the New York photographers held off because Mr. Seavey snubbed them. They may both be right—or wrong.

Our humble opinion is that there were plenty of visiting photographers in New York to make one of the most gloriously profitable and pleasurable photographic love-feasts ever held in any city, and plenty of material there to do it with, if they had only made it their first business, buried their selfishness, pulled together, and taken every advantage given them. But they neglected the opportunity. Only 85 votes were polled for the President-elect! Only 39 votes carried the Convention of 1882 to Indianapolis, afterwards made unanimous. Lots of duties were neglected. Where were the members? If "the West" brings its carloads "East" for such neglect of opportunity, the whole country will—suspend judgment until we see what "central" Indianapolis will do.

To us it was a great grief to see so much good oil bubble out of the well, with no tanks there to gather and save it, and profit by it. We must all do better.

INCIDENTS OF THE CONVENTION.

THE *worst* cold-shoulder our New York Convention had presented to it was from the Press. Scarcely any notice was taken of us at all by the newspapers. But a few of those reportorial sharks, whose mouths are ever open wide for "items" for their correspondence with other papers, "discovered" us and made some comments, which we give place to below for the amusement and reflection of our soberer readers.

PHOTOGRAPHERS IN COUNCIL.—We are having a photographer's convention here. Most of the picture-makers in attendance are from the West. Why they came to New York to exchange views on the best methods of taking likenesses is, as the late Dundreary-Sothern used to vacuously observe, "one of those things which no fellow can find out." They do some odd things, those occidental artists on albumenized paper and collodion-bathed plates. Yesterday a couple of their experts undertook to show the less skilful of the brothers how to *pose* sitters. The wives of two of the delegates—comely young women, both — volunteered as subjects for the lesson. A Minnesota photographer, bearing the euphonius name of Dumble, took the first lady in hand. He twisted her head from right to left, next *vice versa;* then jerked it up and down, as though it had been a pump-handle. He finally left the unfortunate woman with her head in an attitude assumed by the clown in the pantomime of "Humpty Dumpty," when he tries hard to look around for the purpose of seeing if he was seriously hurt under the left ear. Dumble explained that he had been trying to get the light from the end of her nose, because the illumination made that organ too prominent; "it was too big a nose, anyhow!" Suiting the action to the word, the gallant artist put one of his fingers *on* her nose. The lady bit her lips and blushed; the assembled photographers looked edified. I wonder how the *husband* of the victim felt? One Beebe, of Chicago, took the second lady in hand. He spun her around like a teetotum, "because," he said, "she is too square-shouldered for an arteesteec picter!" There was too much lace around her neck. "No woman," said Mr. Beebe, "with a short neck should wear lace in that way!" Not only did the lady's cheeks turn crimson, but she forgot that she was the subject of a lesson, and plucked down the offending lace. By way of a finish, the Chesterfield from Chicago added that the lady's features were coarse and large, therefore he would throw a soft light on them. After the unfortunate's picture was taken, she quitted the stage in a hurry. Wonder if the photographers of the booming West are as candid with their female patrons as they are with the wives of their professional brethren.—*N. Y. Correspondence of Philadelphia Sunday Dispatch.*

PHOTOGRAPHERS SNUBBED—TRUE INWARDNESS OF THE RECENT CONVENTION.—The annual Convention and Exhibition of the Photographers' Association of America closed in New York last week for the first and probably the last time. A more dissatisfied and unadhesive body of men never before convened in New York. The American Institute, where the Convention met, had been gorgeously decorated for the occasion by the very men who are held responsible for the alleged fiasco. The main hall was well filled with splendid collections of crayon and photographic work from many parts of the country, and with all the paraphernalia of the art, including patents, machines, "backgrounds," rocks, iron, and rustic work in imitation, with their clinging and twisted vines, as artificial as they appeared fresh and natural. There were salesmen in abundance to work off the goods. Handbills announced some wonderful "spot" performances in the photographic art. The usual verbal effusions replete with fun, humor, and ludicrous studio experiences were expected from operators who had for years practised the flattering deceptions of making ugly people pretty. The invited public were prepared for a grand free circus, but soon saw their mistake. None of the great New York, Philadelphia, and Boston artists, whose names are known all over the country, were represented, and only three New York photographers of any kind were in attendance. The conclusion naturally jumped at by the general visitors was that the Convention was ignored by New York photographers. The audience proper was composed mostly of Western men, who were crowded into a few chairs in the back part of the building, among machinery, lumber, and broken boxes. The great "splurge" was on the articles exposed for sale in the main hall by the manufacturers at the different cities, who have no interest in common with the practical photographers other than to make the Convention an exposition and mart for their goods, and get their money, and who should not be members of the Association from the fact that all the dissensions in and dissolutions of the society during the past twelve years are traceable to them. The Western members felt keenly the shabby treatment they received at New York after being so cordially received at the grand exhibitions at Chicago, Cleveland, and Philadelphia, and they demanded an explanation and got it. The Association appoints a local secretary at the city where the Convention is held. He is invested with an arbitrary one-man power, and all the local societies of that city co-operate with him and render him assistance if he wants it. The Association has tried to keep the mercantile element out of the offices for reasons palpable, but the local secretaryship fell upon a well-known decorator and painter. A joint committee of the photographers of the American Institute, the operating photographers, and the local society waited upon the secretary, who suggested a day when he would meet them. At the time appointed Messrs. O. G. Mason, J. Traill Taylor, Henry J. Newton, Percy McGeorge, Edward Bierstadt, and others called at his house, and were told that he had gone fishing. He, it is alleged, never communicated with them or the local vice-president at all until the Convention met. Many leading photographers whom the members expected to meet *wanted to take part*, but they *could not* enter except through the local secretary. The *New York operators were simply snubbed*, whether intentionally or not, and the out of town members felt that they were snubbed by the New Yorkers.—*New York Mercury, August 21st*, 1881.

THE P. A. OF A. PROGRAMME.

THE following is a reduced copy of Local Secretary Seavey's announcement circular. It reads well—it took—and was taken, and fulfilled. Much "between the lines," however, was neglected.

Second annual Exhibition and Convention of the Photographic Association of America, at the American Institute, Sixty-third Street and Third Avenue. Three days only. Tuesday, August 16th, Wednesday, August 17th, and Thursday, August 18th. Open from 9 A.M. till 6 P.M. Admission free Elevated R.R. trains stop at door. Photographs from all parts of the continent. Wonderful instantaneous views by Sergeant Van Sothen, U.S.A. Vessels photographed while being blown up with torpedoes. Steamboats and sailing craft photographed while in motion. Photographs by electric light. Views from Algiers, Africa. Photographs by new processes. Photographs of the stars, by Professor Draper. Fine old daguerrotypes, novel apparatus. Dry-plate outfits for newspaper reporters and tourists. New photo-printing processes. Lectures and discussions, daily, at 10 A.M. and 2 P.M. Photo Board of Trade meets daily. Hayes' patent skylight. Persons posed and photographed daily in the gallery. The lightning printing process. Microscopic and magnified photographs. Babies laughing, crying, sleeping. Portrait, in oil, of Daguerre. Photograph of a mule taken by electricity at the instant his head is being blown off by dynamite. A wonderful Exhibition. The largest ever held in New York. Special cars from North, East, West, and South will bring a vast concourse of the advanced photographers of the continent to this Convention.

DOTS FROM THE N. Y. P. A. OF A. CONVENTION AND EXHIBITION.

BY A. N. OBSERVER.

THE best address was made by Mr. J. F. Ryder, of Cleveland. The finest exhibition of dry-plate work negatives and prints was that of Mr. John A. Scholten, of St. Louis. The most astonishing industry was shown by Mr. Secretary Gayton A. Douglass, of Chicago. The most "official" man was Mr. President John Carbutt, of Philadelphia. The most abused man was Mr. Local Secretary L. W. Seavey, of New York. The hardest-to-understand men were the New York photographers. The most ignored and impugned men, and those whose money was used the most, were the "dealers." The biggest thief stole several exhibits and a copy of Wilson's *Photographics*. The least courteous photographer was he who failed to make a motion to thank the trustees of the American Institute for the use of their building free of charge. The most forgetful photographer, and the most ungrateful, was the tall member who failed to have an appropriation made in behalf of Secretary Douglass, to cover his actual expenses, as was done last year for the then secretary. The most timid operator was the medium-sized one who neglected to use that splendid skylight and its accoutrements for the benefit of his assembled co-workers. The man who neglected his opportunities most was he who absented himself from the meetings or fell asleep during the addresses. The man in mightiest earnest was Father Southworth, of Boston. The man who made the most money stands in the background business. The biggest rock was the one on which the N. P. A. split. The most attentive man was Dr. C. R. Morgan, stenographic reporter for the *Philadelphia Photographer*. The most *rest*-ful man was Mr. F. M. Spencer, of Mansfield, Pa. The most good-natured man was Mr. J. H. Fitzgibbon, of St. Louis, Mo. The most impolite men stood upon the platform and hid the view of those who had seats below them. The most attendants came from *the* "West." The beautiful photo-lithographic satin badges were made by Mr. Robert Benecke, of St. Louis. The least attendance at any one session happened while the election was being held. The most astonished man was President-elect Mr. Joshua Smith, of Chicago. The meanest photographers there stole into the meetings with borrowed badges, without paying any dues. The most "busted" body was "the ring."

The most I can say for the Convention is, that it was the worst one ever held by the photographers of America.

POSITIVE PICTURES ON GELATINO-CHLORIDE.

LAST week we laid before our readers an extract from the theoretical portion of a new work on gelatino-chloride, which has been published by Dr. Eder and Captain Pizzighelli; and we now propose to give such practical details of the author's methods as shall enable our readers to avail themselves of the excellent method put forward by these indefatigable experimenters.

Two methods of preparing the chloride emulsion are considered—the first method (without ammonia) yielding pictures which may be bright brown or reddish toned, according to the developer selected; while the same emulsion, if digested for twenty-four hours, can be made to yield pictures having a fine violet-black tone.

The non-ammoniacal emulsion is prepared much after the manner generally adopted for the production of a gelatino-bromide emulsion, the soluble chloride being contained in a warm gelatinous solution, to which the silver nitrate is gradually added, while the mixture is kept in continual agitation. Twenty-five parts of gelatin are dissolved in 200 parts of distilled water, together with 7 parts of sodium chloride, and 6.40 parts of ammonium chloride, it being convenient to allow the gelatin to swell for half an hour before applying heat. The gelatin being dissolved, and the solution at 50° C. (122° F.), a silver-nitrate solution containing 15 parts of the salt in 200 parts of water is gradually added with agitation; and it should be noted that it is advisable to warm the silver solution to the same temperature as the gelatinous liquid.

The chloride is deposited, under these circumstances, in a very fine state of division, and the mixture is at once poured out to set, a beaker or drinking-glass serving very well as a mould, and external cooling may be resorted to when it is desirable to work expeditiously. The gelatinized emulsion may now be cut into strips by means of a horn spatula or a strip of glass; but if a more perfect state of division is desired, it may be forced, nutmeg-grating fashion, through a piece of wire netting. In either case the material is tied up in a piece of muslin, and is suspended in a vessel containing a considerable quantity of water, this being changed five or six times, unless a stream can be kept flowing through the vessel. The washing may occupy a period of six to twenty-four hours, according to the state of division to which the emulsion is reduced, the temperature, the frequency with which the water is changed, and other circumstances. This operation being satisfactorily finished, the emulsion is well drained, and is next melted at a temperature of about 50° C. (=122° F.).

As regards the filtration of the emulsion, fine linen, purified cotton wool, or a special paper which is sold for the purpose at the German photographic stock houses, may be used. The emulsion is now quite ready for use in coating either ordinary glass, opal glass, or paper; but if it is considered desirable to preserve the emulsion in the jelly form any great length of time, it is advisable to add 0.2 parts of thymol or phenol to each 100 parts of emulsion, the preservative agent being previously dissolved in 5 to 10 parts of alcohol.

For the dark-room, used for the preparation of the chloride emulsion, it is sufficient to provide the ordinary yellow or orange illumination required in working the wet collodion process.

In further consideration of this subject, we pass on to describe the method of preparing a chloride emulsion with ammonia, this being specially adapted for making window transparencies, as it tends to give deep brown or almost black tones; and, moreover, it is well suited for making reproduced or enlarged negatives, as the printing density can be better estimated than in the case of a reddish or bright brown tint.

In preparing ammoniacal emulsion, the same relative proportions of gelatin, soluble chlorides, and silver nitrate may be taken as in the case of the non-ammoniacal emulsion described in our previous article. To the silver-nitrate solution, however, as much liquid ammonia is added as will serve to redissolve the precipitate which is first thrown down. The ammoniacal silver-nitrate solution is then added to the gelatinous liquid with precisely the same precautions as were detailed in the directions for preparing the plain emulsion; after which all subsequent operations are conducted as already described.

The ammoniacal emulsion may also be prepared by adding ammonia to the previously made non-ammoniacal emulsion; but the treatment of the silver solution with ammonia is a preferable proceeding, as the precise quantity required is then clearly indicated by the dissolving of the silver oxide first thrown down, and, moreover, the operation becomes independent of any slight variation in the strength of the ammonia.

It is a noteworthy circumstance that fog is not in any way to be feared in the case of the ammoniacal emulsion; but when a bad sample of gelatin is used, there is a very considerable tendency for the film to frill and separate during the operation of fixing.

When the non-ammoniacal emulsion is

digested at a temperature of 35° to 40° C. (95° to 104° F.), it becomes so modified as to give darker images; a digestion of twenty-four hours serving to so change it that, instead of yielding yellowish-brown pictures when developed by ferrous citrate, it gives violet-black pictures; and, by a shorter digestion, intermediate tints may be attained.

The glass plates should be cleaned with a dilute solution of water-glass (say 1 part with 200 parts of water). A few drops of this are poured on a plate, and then wiped off with a clean cloth, the plate being rubbed until it is quite dry. When, however, a quality of gelatin has been used which possesses a considerable tendency to frill, the treatment with water-glass is not sufficient to prevent the film parting company from the glass, and the chrome-alum substratum of Dr. Vogel should be adopted. This is prepared by dissolving 1 part of gelatin in 300 parts of water, and adding 6 parts of a 2 per cent. solution of chrome-alum, a few drops of carbolic acid being stirred into each ounce if the mixture is to be kept for any great length of time. The preparation is poured on like collodion, and the plates are arranged in a vertical position to dry.

As in the case of ordinary gelatin plates, it is generally advisable to warm the glasses before coating with the sensitive preparation, this being done by placing them near a stove, or, better still, by using a zinc plate-box which is constructed with double walls, the interspace being filled with warm water. The coating is most easy to perform when the plates and emulsion are at the same temperature.

Few special remarks are needed respecting the coating and drying of the plates, but it is worthy of note that each square centimetre of glass should retain about 0.036 cubic cent. of the emulsion (about 3¼ grains to each square inch).

When dry, the ammoniacal plates appear almost opaque, and are grayish-blue by transmitted light; while the non-ammoniacal plates are much more transparent, and transmit a reddish-yellow light. Even when very thickly coated, they appear much thinner than bromide plates, but vigorous images appear on development, although the coating of emulsion may be very thin.

The dry-plates may be preserved in light-tight boxes, or preferably be wrapped in brown paper, each pair of plates being placed film to film; but care must be taken not to scratch or damage the sensitive surface. The authors consider it unadvisable to place a sheet of paper between the films, as irregularities in development often result from such a proceeding; but strips may be placed between the edges to prevent contact. It is, moreover, a very excellent plan to dust each plate with a camel's-hair brush before packing. The plates thus prepared and packed, keep well; it being, of course, understood that such obviously injurious agents as light and moisture are properly guarded against. When, on the other hand, chloride plates have been prepared with excess of silver nitrate, these being sometimes useful for direct printing without development, the keeping qualities are very limited.

An exposure of one to three seconds under an average negative is generally required when the printing-frame is uncovered in diffused daylight, the ferrous-citrate developer being made use of; while thirty minutes, at a distance of five feet from a bat's-wing burner, may be regarded as an average exposure when gas-light is used.

The preparation of the ferrous-citrate developer, and the development of the latent image, will be treated of in our next article. —*Photographic News.*

SOCIETY GOSSIP.

Chicago Photographic Association.—Regular meeting at Douglass, Thompson & Co.'s, 229 and 231 State Street, Wednesday evening, September 7th, 1881. A. Hall, President, in the chair. Called to order at 8 o'clock. Reading of minutes of last meeting dispensed with. Committee on badges, etc., made its final report and was discharged.

Mr. Greene introduced to the meeting the new President of the Photographers' Association of America, Mr. Joshua Smith, who was called upon by the Chair to make a few remarks on the recent trip to New York, and for his ideas of the Convention.

Mr. Smith, in reply, said he had very little to tell the members on these points, as some of those present knew from personal experience they had a very pleasant trip. An extra train was placed at their disposal over the entire distance, and an "observation car" attached from Pittsburgh over the mountain division of the road, so that they had had unusual opportunities for viewing the magnificent scenery of this part of the Pennsylvania system, and not only that, but the train stopped whenever they wished, to enable them to take views; a privilege of which many delegates, including several here present, availed themselves, and some of the results secured were very satisfactory. In short, everything was done that could be done for their comfort and convenience, by the officers of the Pennsylvania Railroad, for which we consider ourselves under great obligations to them. Unfortunately, the weather was not so considerate, being cloudy, with occasional rain, until the day was well advanced, so that most of the views were taken under serious disadvantages. But considering this, and the hurry in which they necessarily had to work, the results were very creditable, as might be seen by an inspection of the specimens on view to-night. For himself, he had tried the experiment of exposing from the rear of the train while at full speed, and while the results he achieved were not exactly fine specimens of art, they were interesting as showing the possibilities in that direction. The fact that the wind was against the train, and blew smoke and dust to the rear, greatly increased the difficulties under which he labored; moreover, it was a first attempt at that description of work, and on the whole he did not feel discouraged. The shutter he used was the one exhibited by him at the last meeting of this Association.

On arriving at New York we happened to strike a cool wave, which held on during the whole time of the Convention, with occasional showers, making it very pleasant. We found that the hall of the American Institute was plenty large enough, and to spare. As to the exhibits, my observation was that the West and Northwest is fully able to hold its own against the East. Certainly the finest displays made were by Western men, Mr. Scholten, of St. Louis, being especially notable in this respect. The New York photographers did not seem to care about exhibiting, but observations made at the leading galleries there only confirm what I have just said.

There must have been between four and five hundred delegates present, and, in a city like New York, it was very hard to keep them together. Moreover, there seemed to be some misunderstanding—due, probably, to the notice-board at the hall—as to the time of closing the Convention, many supposing that Thursday was the last day, while in fact it lasted over Friday, which was the day for election of officers. And, partly owing to this misunderstanding, partly to indifference, the attendance at said election was much smaller than could have been wished. He was sorry to see that the old trouble of "photographer *vs.* stockdealer" had cropped up again at this Convention; he had hoped it was dead and buried long ago. There was no necessity for any antagonism between the two elements; each was necessary to the existence of the other. It was to the interest of the stockdealer to exhibit at, and take part in, these annual conventions; it was to the interest of the photographer that he (the stockdealer) should so exhibit and so attend; both classes being thus interested in the success of the Association and its meetings, both should contribute to its support, and both have a voice at its discussions.

The Chair hoped that some of the other returned delegates would give us the benefit of their experience.

Mr. Greene.—I think my *confreres*, generally, will join me in saying that pretty much all (in a photographic point of view, I mean) that we saw in New York we took with us. As the last speaker remarked, the display of Eastern work, with one or two exceptions, was miserable; there was no turn-out of the New York photographers to meet us; and, speaking generally, the want of interest in the Convention displayed by the Eastern people should induce us to keep the meetings in the West for the future.

As to the new officers, I, for one, am well satisfied with the selection that has been made. The "ring" is effectually broken up, and next year, when the Convention will be held in a comparatively small town, with few outside attractions to draw the members away from the meetings, I anticipate a great success.

There was little in the way of novelty to be seen at the late exhibition. Mr. Pearsall had something original in the shape of a panel picture arranged horizontally instead of vertically. It seems to me that style may be worked up to make an attractive picture, but I would, with due deference to Mr. Pearsall's long experience and great capabilities, venture to suggest that, if he has not room to get in the whole figure, it would be better to omit the feet rather than the head.

We could not have had a better time than we did have going East; our worst trouble was the want of a suitable dark-room in which to change plates; but notwithstanding this and the unfavorable weather, we succeeded in bringing home a few negatives of which we do not propose to feel ashamed, prints from some of which may be seen on the walls and tables of this room.

The Chair.—It is very gratifying to me, as doubtless it is to most of you, after the somewhat cavalier manner in which this Society has been treated in some quarters, to find that the Photographers' Association of America has to depend on us largely for its supply of officers.

Mr. J. F. Edgeworth.—Nothing seemed to be talked about in New York but dry-plates. I never was so sick of them in my life. I can corroborate Mr. Smith's remarks about New York galleries; they are certainly far behind Chicago.

I cannot agree with Messrs. Greene and Smith as to the desirability of holding conventions in a small town. I am afraid the next one will prove rather a dry affair, and no not believe the attendance will nearly come up to the last.

Mr. Greene.—It seems to me that if the convention itself is not of sufficient attraction, photographers had better stay at home. But I think it will be our own fault if we do not make it sufficiently attractive. We can organize out-door excursions for making views, testing different plates, apparatus, etc., and to me, at least, as a landscape man, this would be more interesting than the way in which much of our time in New York was occupied; and, even looking at the matter from the standpoint of outside attractions, I am inclined to think that probably our Western prairies may have as much interest for Eastern men as the sea and other Eastern institutions have for us of the West.

There being no further business before the meeting, some little time was spent by the members in looking at the prints (made from the negatives taken on the trip to New York) with which the walls and tables were adorned. Much interest was excited by Mr. Smith's instantaneous views, taken from the rear of a train running forty miles per hour; they were certainly remarkable as examples of what can be done with gelatin under very unfavorable circumstances. There can be no doubt that, given a little practice in this particular branch of work, and more favorable circumstances as to weather, etc., a photographer might obtain many fine views in this manner.

But in this instance, so far as fine work was concerned, the palm was carried off by a series of eighteen 5 x 8 views by Mr. J. F. Edgeworth, which, handsomely mounted on bevel-edge gilt cards, occupied a prominent position on one side of the room, and were much admired. None of these were intended as examples of rapid work, *i. e.*, exceptionally rapid, having been made when the train was standing.

Mr. Edgeworth says that he can hardly supply the demand for copies of these views and keep his other work going at the same time.

Mr. Greene also exhibited a series of views made on the trip; but, although there were two or three fine things among them, they were uot up to a mark as a whole—some from errors in exposure, some, apparently, from defects in the plates themselves.

On motion adjourned to first Wednesday in October.

F. H. Davies, *Secretary*,
78 Michigan Avenue.

Another regular meeting was held on Wednesday evening, October 5th, 1881. A. Hall, President, in the chair. Called to order at 8 o'clock. Minutes of last meeting read and approved. G. A. McDonald and Alfred Woollett were elected members.

At the request of the Chair, Dr. Garrison proceeded to give the meeting a brief sketch of his photographic experiences during his last summer's trip with Prof. Bastian, of Chicago University, through portions of Virginia, including the neighborhood of the Natural Bridge, etc. The Doctor said that, having decided to take their holiday trip in that part of the country, it occurred to himself and his friend that it would not be a bad idea to take along a small dry-plate outfit, and, as their object was the production of lantern slides, they concluded that 5 x 4 plates would be the most convenient size. Therefore they purchased one of Anthony's $10 outfits, and one hundred of Cramer & Norden's extra, rapid plates. Perhaps they did not display very sound judgment in purchasing such a cheap rig; undoubtedly it did as good work as could be expected at the price, but you can't expect a great deal for $10. They had trouble particularly with one of the "side-kick" double-holders. The slides were not a sufficiently close fit, and in withdrawing them some light struck one end of the plate, thereby spoiling some otherwise good negatives. Of course, if he had been aware of this defect before starting, it could easily have been remedied; but supposing, of course, that the holders were sent out by the makers in perfect condition, he did not examine it carefully, and, as none of his plates were developed until his return here, he did not discover the defect until too late to remedy it, so far as the results of this trip were concerned. They tried some of the plates before starting, and found them to work satisfactorily; as to rapidity, it seemed as if the exposure could hardly be made too brief; nevertheless, he did succeed in undertiming some. A few of them showed, on development, a peculiar and extremely annoying defect,—they were sprinkled over with transparent spots of various sizes, but uniformly round in shape,—in fact, insensitive spots. It was extremely annoying to have such a spot occur, perhaps as large as a tack-head, in the most important part of an otherwise faultless negative; and he could not assign any certain cause for them. One view in particular, an almost instantaneous one of the Kanawha Falls,—perhaps the best negative of the entire series,—showed, on development, a large hole in the middle, almost ruining it.

Then we met with another mishap, and *apropos* thereof, I may remark that while on this trip we enjoyed our first, last, and only canal-boat ride; moreover, very soon this canal, the only one in the country now carrying passengers, will be closed, for it is being converted as rapidly as possible into a railroad. In view of the somewhat unique circumstances, therefore, I took a few views of the boat, the company, and surroundings, and am very sorry to say they were all total failures. The reason was this, the weather was extremely hot, over 100° for a week at a time, in Cincinnati, while we were on this trip, but not quite so hot, perhaps, where we were. Now, from keeping the plates in the holders, on deck in the broiling sun, waiting for a suitable opportunity to expose,—as the stoppage of boat in a lock, etc.,—the gelatin must in some way have become softened, for they all frilled hopelessly in the developer, and these were the only plates that did frill.

Then, again, we often experienced serious inconvenience from the want of a suitable dark-room in which to change plates, etc.; to add to our woes in this regard, our red lantern got smashed quite early in the expedition; but, after recovering from my first vexation at this mishap, I came to regard it as a blessing in disguise, and thenceforward plate-changing with me became "purely a matter of feeling." My *modus operandi* was as follows: I would shut myself in the darkest room or closet to which I had access, lay my holders and package of plates on a table, box, or anything that came handy, and, covering the whole with a good-sized piece of black velvet which we carried for that purpose, insert my hands underneath, and perform the operation of plate-changing entirely by the sense of touch. I may remark, incidentally, that I found I could increase the darkness of the room by closing my eyes. You smile; but, joking aside, there is some philosophy in this after all. When your eyes are closed, you can better concentrate your attention on your other faculties. When we returned home, we tried first to develop some of our plates with ferrous oxalate, but did not succeed very well; so I substituted pyro, using Nelson's formula with addition of citric acid, as recommended by Mr. Smith, and all went well. Some of the negatives were a little too thin, but we did not intensify any of them, for my experience has been that you lose detail by so doing, and, as our object, as mentioned before, was to make lantern slides, that would have been a great detriment. We have already made a good many slides from these negatives, and although experiencing difficulty on account of thinness of some of the negatives, the slides as a whole are very fair; it is likely that, before long, I may project some of them on the screen at the College of Pharmacy, and in that case will try to give this society notice thereof. We obtained altogether about eighty-five negatives that would pass muster, not so bad considering all the drawbacks we had to contend with. Altogether, we had a very pleasant time, the only drawback being the extremely hot weather. The Virginians everywhere seemed glad to see us; treated us as well as they knew how; and generally that was very well indeed; and charged us very moderate prices for accommodations and whatever we needed. So far as our observation extended, the war seems to be forgotten in that section of the country. If we had been provided with a portrait equipment, we could have cleared our expenses, and considerably more; every one, and especially the colored population, seemed to want their picture taken, and to be willing to pay any reasonable price therefor. But, of course, we had not the facilities to accommodate them, nor did we go there with commercial intentions. But it looks to me as though there might be a good opening down there for some photographer who is making no money here.

Mr. Gentile.—Don't you think the spots you speak of arise from not sufficiently wetting your plates before development, thereby causing the developer to flow unevenly, that is, to leave the spots untouched?

Dr. Garrison.—No. I gave them a good soaking. I am inclined to think they may arise from the manufacturers not carefully cleaning their vessels between different batches of emulsion. Thus, suppose that some fragments of a previous and slower batch had remained in the vessel in which he dissolved his emulsion previous to coating the plates. Well, you may say, even in that case, these fragments would have become thoroughly incorporated with the new batch, and at most only a slight, general reduction in sensitiveness would have resulted; but, as a matter of fact, we all know how long a few particles will remain nearly solid, after the bulk of the gelatin has become perfectly fluid; and it seems to me that some of these particles of old emulsion may have thus passed through the filter, and getting on to the plates, have produced the spots in question.

Mr. Edgeworth.—I agree with the Doctor that the spots were not caused by insufficient wetting, because I have been troubled with them myself, and I never wet my plates before development, yet I do not think I have had three plates with that defect in the last three months. On the other hand, I cannot accept the Doctor's theory, for two reasons: First, the firm whose plates he used make but one grade of sensitiveness, and, moreover, they are very uniform in that respect; and, Second, the lumps conjured up by the Doctor's imagination would not pass the filter used by the makers in question, which consists of chamois-leather. My own impression is, that these spots result from imperfect washing of the emulsion, whereby the nitrate salts not being perfectly removed tend to collect in nuclei, and of course form insensitive spots.

Mr. Greene.—I have experienced a great deal of trouble from these same spots. My opinion is, that they arise from two causes: First, imperfect cleaning of the glass before coating. If you look at the back of one of these defective plates, you will see it streaky, as though it had been very imperfectly wiped with a cloth, perhaps a dirty cloth at that. Second, minute particles of soot (probably, but not necessarily, from the lamp used as the dark-room light, or for heating the emulsion) settling on the plate during setting or drying. This soot is of a greasy nature, and spreading in a circular form, causes these insensitive spots. I have usually noticed, when closely examining such defective plates, that there is a minute black speck in the centre of these circular spots.

Mr. Smith.—There are quite a number of opinions as to the cause of these spots. My own impression is that they come from the gelatin itself, and my reason for this opinion, based principally on my personal experience, is, that some brands of gelatin used alone will give a vast number of these spots, others will give none at all, and a mixture of the two kinds will perhaps result in a few. I am inclined to think grease is the cause, but am not satisfied on this point. Now, if you use Coignet's gelatin alone (and it is well known that this gelatin is extensively used by makers of commercial plates), you will probably get a big dose of these spots; if you use Nelson's No. 1 alone, most likely you will not be troubled with them at all, while a judicious mixture of the two will generally leave you nearly free from them.

Supposing these spots to be caused by grease, and I see no other solution of the question, if, as I think I have proved, they are due to the gelatin itself, it is easy to understand this action. The grease, in setting, tends to concentrate into spots, which again radiate into surrounding surface, and gradually die away as the plate dries; these grease-spots repel aqueous solutions, and thus prevent the action of the developer at these points. How to get rid of them is another matter, and I fear we will always be troubled with them more or less. Imperfect cleaning of the glass may sometimes produce them, and, as our friend Greene says, specks of soot or dust falling on plates while setting or drying. Have seen spots as large as the head of a tenpenny nail.

Mr. Gentile thought perhaps flooding the plate with alcohol previous to development might help the matter.

Dr. Garrison remarked that he had frequently noticed the little black specks in the centre of transparent spots as described by Mr. Greene, but again many of them did not, so far as he could see, contain any opaque portion at all. Was not aware that Cramer & Norden used chamois-leather for filtering, or he would not have hazarded the "lump" hypothesis. Still, it was astonishing what you could get to go through even chamois-skin—mercury, for instance, could be readily squeezed through it.

Mr. J. F. Edgeworth would like to have had some of the Doctor's plates that frilled. Thought he could have developed them without frilling by coating with collodion first. He had put plates so treated in water over 100°, without any signs of frilling showing themselves.

Mr. Smith thought it would be a good idea for makers to send out plates ready collodionized. Did not believe it would affect sensitiveness.

Mr. McDonald showed a new internal shutter for studio work, being the same exhibited by him at the New York Convention, but since that time he has made an improvement by putting on a string attachment, with an additional spring, strong enough to overbalance the handles and close the shutter when the string is released, thus allowing it to be operated from any convenient part of the room; this attachment can be engaged or disengaged in a second, allowing the shutter to be opened or closed by hand through the side handles as before. The members seemed to be well pleased with the whole arrangement; and, in answer to several inquiries, Mr. McDonald stated that the price complete is $5.

A number of fine prints by Mr. Beebe, from negatives on Beebe plates, were lying on the table, but in Mr. Beebe's absence no one could supply any information concerning them.

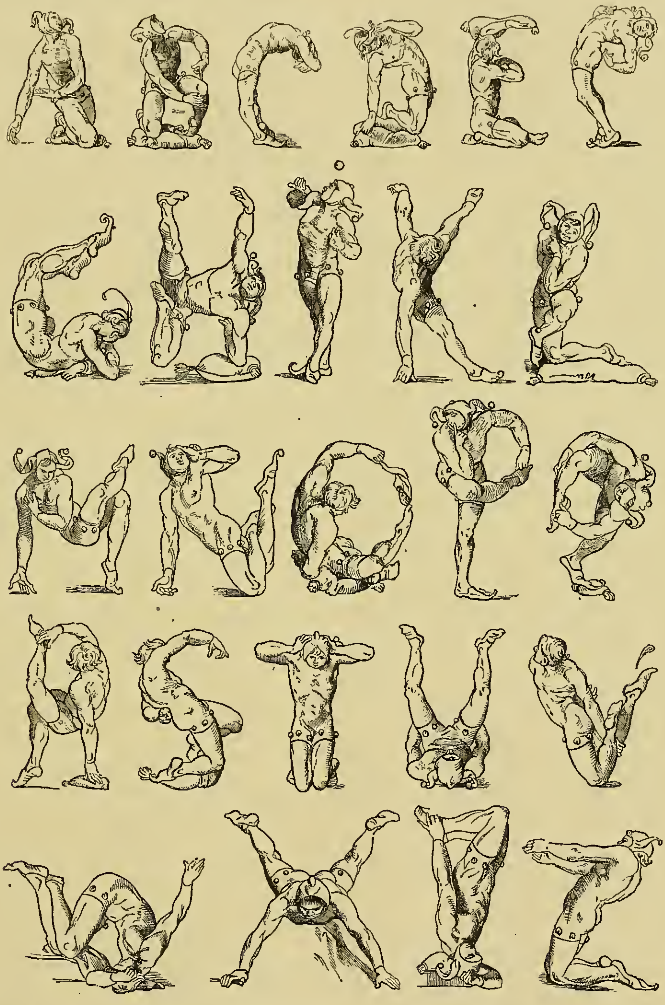
On motion, adjourned to the first Wednesday in November.

F. H. Davies, *Secretary*,
No. 78 Michigan Avenue.

Photographic Mosaics, 1882, is largely in type, and partly printed, and will be issued early in November. It will be full of excellent things, especially upon emulsion work.

POSE SUGGESTIONS.

Agreeable to the promise made in our last issue, we present below a photo-engraving by Mr. Ives of some twenty-five suggestions to photographers for posing the human figure divine.



As we have for years back, when pounding art principles applicable to photography into the cranium of our patrons, insisted that we did not give certain rules and examples for exact following, but rather as suggestions which might have a benign influence upon the photo-artist and mould his will when posing; so, now, we beg to say that these suggestions for positions are not meant to be followed *ad literatum*, but are given for such service as they may be able to impart when the photographer feels like running wild or hari-karing himself amid his models, as Mr. Sarony and others seem to do when they "go for" *action* rather than naturalness.

They may be the "a, b, c," of the art which these gentlemen follow, and are perhaps the key to their secret. They are certainly full of suggestions and material for study.

We obtained them from the *Fliegende Blatter*, a newspaper of the German persuasion, to which we are indebted for much entertainment and information.

We leave them with you, trusting their good lessons may not be forgotten, and that our readers will not indulge TOO much in acrobatic attitudes.

VOICES FROM THE CRAFT.

Editor Philadelphia Photographer.

Dear Sir: I rise to explain about the frame of pictures that appeared at the late Convention, upon which my name seems to have been put. I had no exhibit there, and did not intend that any should have my name attached.

The manufacturers of the "Peerless Albumen Paper" asked that they might have some prints from my negatives to exhibit as specimens of their brand of paper. The prints were given them, and it was intended that they should be entered only as samples of that paper. I was surprised at finding that my name had been put in large letters on the show-card, thereby giving the impression that I had sent the pictures.

I was not a member of the Association, and did not intend to be represented by any exhibition of my work. If I had designed doing so, I would have been more particular as to what was sent, and, perhaps, could have gotten up a more attractive exhibition.

This is not designed as a reflection upon the conduct of the manufacturers of the Peerless paper, but merely as an explanation of how the pictures came to be there in the shape they were.

The person who got up the show-card, supposing my name ought to go on it, took the liberty of putting it there.

I trust the photographers will believe that a more attractive display could have been made if it had been my intention to make any. Very truly yours,

J. H. Kent,
Rochester, N. Y.

Preserving pictures upon emulsion paper, and to make them absolutely durable, it is recommended to coat the picture side with raw collodion, and the reverse of the cartoon with paraffin.

PHILADELPHIA PHOTOGRAPHER ONCE MORE TO THE RESCUE.

A short time ago a gentleman in Philadelphia obtained letters patent for the very simple matter of cutting the sensitized paper to the proper size before printing, and also marking the negative with pencil, or a paper mat, as a guide for centring the image. This gentleman is now visiting, or sending his agents to, some of the galleries where this plan has been adopted, and demanding various sums of money for the use of what he claims as his invention. He presented his claims to my employer, and as I had recommended the adopting of the plan, I felt it my duty to obtain what information I could upon the subject. I thought it had been used previous to his adopting it in the gallery where he is connected. I have learned that Mr. E. L. Wilson used it in his extensive establishment during the Centennial Exhibition. I also ascertained, by referring to my journals, that it had not only been used, but also published back as far as 1872.

In an article by Charles Ferris, on "Cutting and Silvering Paper," published in the July number of the *Philadelphia Photographer* for 1872, page 248, I find that after describing the manner to cut the paper so as to give the largest number of prints from a sheet, he goes on to describe what he is pleased to term "a time- and labor-saving dodge." It is simply this, the cutting of the paper the proper size before printing, and as he distinctly states, to obviate the necessity of any further trimming. He further states that he had practised it for five years previous to this.

Probably the editor of the *Philadelphia Photographer* can advise the fraternity what to do in this matter.* Does not the publication of such information as is found in the article referred to make it public property, and prevent it afterward being claimed as individual property?

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* Simply do not pay for any such claims. Our "Centennial" plan was long since described by Mr. Gihon, in his notes on work at the Centennial Exhibition, and we are sure it was followed by many another before us. Let us hear from you.—Ed. *P. P.*

We would be pleased to receive information from any who are working this plan as to their mode of marking the negative, and how long they have been working it.

H. A. Webb.

914 Arch Street,
Philadelphia, October 12th, 1881.

THE COMET PHOTOGRAPHED.

Professor Draper, of New York, has succeeded in photographing the comet, getting an image about the size of a midget, tail and all.

It has been suggested that the great difficulty in taking comets is caused by the sulphurous fumes which proceed from their tails and fog dry-plates hopelessly.

In regard to his success he says: "To obtain such a photograph as I would like, the plate ought to be exposed for at least an hour, but I succeeded in getting an exposure of only seventeen minutes. The result, however, was satisfactory in so far that it demonstrated the possibilities of photographing a comet. It showed the nucleus and coma, and a part of the tail. I wish to take a larger photograph, if possible, so as to examine more carefully the structure of the tail. But the larger the photograph the more difficult it is to obtain, owing to the diffusion of the light. The adjustment of the mechanism is a matter of the greatest delicacy. The clockwork which ordinarily moves a telescope is adapted to counteract the effect of the earth's rotation, so as to keep a star constantly within the field of vision; but this comet has so rapid a motion in declination that a special mechanism is required. Even during the seventeen minutes of exposure that I obtained this morning the northward movement was clearly perceptible.

"If I am successful in obtaining two good photographs, I shall next turn my attention to its spectrum, which is much more difficult to photograph than the orb itself. The reason why the spectrum of a comet is so interesting is that no trace of carbon has ever yet been discovered in any body outside the earth, except in some meteoric stones, which are supposed to be of kindred nature with the substance of comets."

THE PHOTOGRAPHIC AMATEUR.

The Photographic Amateur. By J. Traill Taylor. Scovill Manufacturing Company (W. Irving Adams, agent), publishers, New York. Royal octavo, illuminated paper cover, 96 pp. Price, 50 cents.

The consternation which was created among bank-clerks, book-keepers, engineers, clergymen, professors, managers (in which last class we include the ladies) by the introduction of the American Optical Company's low-priced, dry-plate outfits, convinced the able manager of Scovill Manufacturing Company's New York house that it would not be long before the swelling tide of amateur photographers would demand a book of instruction too. To meet the coming want, Mr. Taylor was called to the rescue, and *The Photographic Amateur*—a noble book—is the result. The distinguished author opens with an able plea for amateur photography, comparing its growth here with that in England, his old home, where royalty and the clergy are side by side occupied by the fascinations of our art, and then, with all his eloquence and persuasive power, gives what he calls "A Course of Concise and Practical Instruction in the Art of Photography," in a most thorough manner. The student is accepted as "a perfect novice" (or an *im*perfect one), and is therefore given all the details, the faithfulness of which is proven at a glance, by a two-page list of contents. Looking into the subject-matter of the work, we are more and more impressed with the care taken to leave the novice at no time in the dark, except just when he *should* be for the greatest good of his results. Of course our author devotes the most attention to the emulsion process, the first six chapters, thirty-seven pages of the work, only bringing us to the front with properly finished negatives. Chapter VII is devoted to silver printing and finishing of prints; Chapter VIII to gelatin emulsion pellicle; Chapter IX to "Photography in a Hotel Bed-room;" Chapter X treats upon "The Wet Collodion Process;" and Chapter XI upon retouching negatives. Then magic-lantern transparencies, ferrotypes, alabastirie positives, and collodion transfers, are each given a chapter. This last will be found very acceptable to any of our readers, as it is well known that this "collodion transfer" process is none other than the "megatype," and we have here, too, nearly a full page drawing of the enlarging apparatus required. Chapter XV treats of "Carrying Plates into the Field," and Chapter XVI of "The Taking of Portraits in a Private Room." The final chapter, XVII, is on "The Construction and Use of Photographic Lenses," a department to which the editor has devoted much time and study, and in which he is largely experienced. An "Appendix" of six pages is finally thrown in as an "extra" of useful hints, and we are done.

This brief review of such an excellent work can give no conception of its scope or value. Every amateur *will* have it, and every practical photographer *should*. It is *full* of usefulness for both, and doubtless its edition of 5000 copies will be all taken up. The work is *beyond* criticism. Were it not, we should call it quite advanced enough for the *practical* worker, and almost too much so for the amateur. We congratulate all concerned in its production, and shall gather some from its pages for these anon.

"PROF. PARK'S" FORMULA.

In *Photographic Mosaics*, 1881, Mr. C. S. Peck alludes to the formulæ of "Prof. Park," which were published by us in the *Philadelphia Photographer* for August, 1880, page 251. Several correspondents have requested us to republish the aforesaid formulæ (inasmuch as our August, 1880, issue is out of print and cannot be had), and we yield to the request as gracefully as possible.

"Prof. Park's" Celebrated Formulæ.

Alcohol and Ether, .	equal parts.
"Climax" Cotton, .	6 grains to the ounce.
Iodide of Ammonium,	2⅔ " " "
Iodide of Cadmium, .	3⅓ " " "
Bromide of Cadmium,	2 " " "

Quick Developer-Stock.

Water, ...	1 quart.
Sulphate of Iron, . . .	10 ounces.
Granulated Sugar, . . .	10 "
Sulphate of Copper, . . .	2 "

Take from stock three ounces to ten ounces of water; acetic acid, two ounces.

Silver Bath for Paper.

Water, ...	1 ounce.
Nitrate of Silver, . . .	45 grains.
Nitrate of Ammonia, . . .	20 "
Nitrate of Lead, . . .	5 "

Enough aqua ammonia to make the bath slightly alkaline. Silver thirty seconds; fume ten minutes.

Toning Bath.

Water, ...	34 fl. ounces.
Gold, ...	15 grains.
Water, ...	17 fl. ounces.
Acetate of Soda, . .	231 grains.

Mix the two solutions, then add four drops of a saturated solution of sulphate of copper; let stand twenty-four hours.

HOW EDITORS ARE QUIZZED.

If our friends *will have it so*, we are quite willing to admit that Wilson's *Photographics* is "nearer being a cyclopedia of photographic information than any other work on our art," but we just as freely admit that there is a limit to our personal knowledge concerning things photographic, and consequently to our ability to answer many of the multitudinous queries sent to us through the mails. We only give one example, which comes on a postal-card, with no stamp for return-postage, or even a promise from this photographic Lazarus that he will remember us when he gets into the photographers' heaven (if there is such a place for such as he), and send us down a drop of cold water. Here it is:

Ovid, Mich., August 4th, 1881.

Dear Sir: Will a 4-B Dallmeyer lens work as quick as a 3-A. Will it work quicker? Will the 4-B take as good a cabinet as the 3-B and as quick or quicker? Will 4-B take as good a card negative as 3-B? Will 4-B or 3-A take as good a *carte-de-visite* portrait as 2-B, which is especially constructed for cards, and which will work quickest?

If Ovid ever was a god, may his mythological carcass frighten all such persecutors away from us forever. Anything *reasonable*, friends—why *ask* for it, if you can't see it.

FRENCH CORRESPONDENCE.

Ducos du Hauron's Process for Increasing the Sensitiveness of Gelatin Plates—Uncertainty of Gelatino-bromide Plates—Frequent want of Solidity and Necessity for a Substratum — Necessity for Coating the Edges with a Varnish Impervious to Water —Utilization of Pellicles which become Detached from their Plates—Enlargements by Expansion—Possibility of Utilizing this Expansion—Hail to the Comet of 1807-1881!

A METHOD had already been indicated for increasing the sensitiveness of gelatino-bromide plates by plunging them into a bath of nitrate of silver, but the preservation of plates thus treated had not yet been reached.

Mr. Ducos du Hauron has successfully repeated the experiments of Messrs. Vogel and Stosch, and, more fortunate than these scientists in what concerns the preservation of plates immersed in nitrate of silver, he has succeeded, so he writes us, in completely eliminating this product, and consequently in permanently preserving the plates rendered four times more sensitive.

This is his mode of operating. He immerses the plates in a bath composed as follows:

Distilled Water, .	1 litre (34 fluid ounces.)
Nitrate of Silver,	10 grms. (2 drs. 34½ grs. Troy.)
Liq. Acetate Amm.,	5 c.c. (81 minims).

They are allowed to remain for a minute, then plunged into a vertical dish containing distilled water, to rid them from the free nitrate.

According to Mr. Ducos du Hauron, it suffices to render the sensitiveness fourfold to bring the plates in contact, even transiently, with the nitrate of silver; the elimination of this substance being in no manner injurious to the increase of sensitiveness. This fact offers considerable interest, and will have for result, if verified by practice, to give a new method for preparing the gelatino-bromide emulsion.

It suffices, after having divided the emulsion into numerous fragments, to treat it with the above nitrate of silver bath, after which the ordinary method of washings for eliminating all the soluble salts may be proceeded with. In this manner we may be sure that we have no free nitrate of silver to injure the sensitive plates.

We may doubtless expect soon a more complete process, not only to increase fourfold, but one hundred-fold, the sensitiveness. Attention, manufacturers of instantaneous stops!

We cannot say that we are satisfied with the certainty of the gelatino-bromide plates used in France. We have tried them from all sources, and we do not hesitate to say that we are never perfectly sure of success.

The greatest defect that we can bring against them is their want of solidity. You arrive home after an excursion; you develop your plates; everything goes well in the oxalate of iron bath; an admirable print rises to view, but, alas, it is still necessary to fix and to wash: then the trouble commences. If the plate is wanting in solidity, blisters show themselves in the hyposulphite of soda, and gradually extend from the edges to the centre of the plate. We have tried, in order to prevent this deplorable accident, greasing with tallow the edges of the plates, as is recommended by our learned colleague, Mr. Stebbing, for his pellicles.

This remedy was not satisfactory. We believe it would be better to use none other than plates previously covered with a substratum before receiving the sensitized coating. This substratum might be bichromatised gelatin in a thin film, washed and finally coated with gelatino-bromide. The adherence to the plate would be caused by insolubilization of a portion of the film of the substratum through the thickness of the plates. For the present it seems prudent, when we have to do with films that are liable to blister, to cover the edges of the plates with a thick gum-lac varnish, using a brush for the purpose. The gelatin thus retained on the edges is not penetrated by the water, and these regretable blisters are avoided, which have been the cause of the loss of a large number of negatives. This accident has just happened to us with plates in which we had full confidence, as they were obtained from one of the most reliable houses manufacturing this article. Instead of believing that everything was lost, we allowed the fixing to continue, whilst the blistering extended almost over the entire plate. Before it was entirely so, and whilst the pellicle still adhered in a few places to the glass, we took the latter very delicately from the hyposulphite bath, and with the same care we placed it in a dish filled with clean water. The pellicle became completely detached from the glass. We then changed the water several times, and introducing a clean plate under the pellicle, with great care we removed it from the water, partially dried it with bibulous-paper, and finally stuck four strips of paper on the edges, so as to keep it in place during desiccation. We thus obtained a negative print enlarged to nearly double the size of the vehicle, still very sharp, and admirably adapted to positive printing. Four prints in succession underwent this treatment, and with the same success. Our clichés were not lost, but they were greatly enlarged and perfectly adapted to use.

This enlargement by the extension of the gelatin is very regular; when the print is not too large, it loses none of its sharpness. This process should receive serious attention, as it would permit, when developing, to increase the size of small prints. What is necessary is, to be able with certainty to separate the pellicle from the plate which has served as its vehicle, or to be able to rely upon the solidity and complete adherence of the sensitized film to its support.

These two modes appear to us feasible. We have said above that the use of a substratum renders the adherence certain; as to the raising of the film, it is very easy to do it, and we thus have an enlarged negative.

Bearing in mind the great importance of having photographic apparatus that can be easily carried, we were led to ask ourselves if, in this enlargement of negatives by expansion, it might not be possible to find the basis of a process for tourists which would consist in the use of very small appliances —the sensitized film being capable in the development, or still better in the fixing, to so expand as to give an image three or four times greater in size.

This is very possible; but to reach this result it would be necessary to have on the surface of the plates a gelatin film sufficiently thick to undergo this fourfold expansion without losing too much of its resistance, or rather of its tenacity, otherwise the rather delicate manipulations required by the washing and the withdrawal from the bath of pellicles having so little consistence would become too difficult. We intend to make some experiments with enlargements by expansion, so as to verify what may be practical in the application of this direct process. It might perhaps be necessary, in order to render the operation less delicate, to put the pellicle, with its support, on a glass plate placed horizontally by means of a water-level, and surrounded by a rim forming a dish, one of the edges being pierced with a hole, to be kept closed during the increase of the pellicle, and to be opened as soon as it has reached the desired dimensions. The water escaping, the pellicle would soon adhere to the support in the desired place, and this without touching it. After having dried with bibulous-paper, four strips of paper should be placed all around to keep the edges in place. As the prints increase by expansion, they lose in intensity, which is easily understood; it is therefore necessary to give more development to the prints destined for this process of direct enlargement.

We intend, shortly, to return to Paris, where we will study with care the Electric Exhibition, and report to our esteemed readers in our next correspondence.

Like all the French press, let us say something in regard to the comet of 1807, whose return in 1881 gives it a period of seventy-four years. Mr. Janssen, our illustrious astronomer, has not neglected to photograph it. It will thus be possible to better compare it with its present condition, when in seventy-four years *we* will again receive its visit. I cannot do better than to wish that we may all see it *when it returns for the third time* amongst us—say in 1955.

Leon Vidal.

Paris, Oct. 1st, 1881.

Nearly one thousand copies of *Wilson's Photographics* have been sold, and the second is under way.

GERMAN CORRESPONDENCE.

About the Distortion of Positive Pictures—Lasting Qualities of Prints in Hot Climates—Testing the Strength of the Nelson Developer.

Recently, at our meeting, the distortion of the albumen pictures was the topic again. Mr. O. Lindner presented three copies of a negative (cabinet bust picture) which showed strikingly the distortion of the albumen paper through dampness. The first picture was neither toned nor fixed, and contained, consequently, only little moisture, and therefore its shape was little altered. The second, which had been cut lengthwise from the sheet, had extended in width; the third had been cut crosswise out of the sheet, and had extended lengthwise, so that the shape of the face was distorted. As a consequence of this distortion, several studios have begun to cut out the papers for the portraits in such a way that, in consequence of the following distortion, broad faces appear somewhat longer, and narrower ones somewhat broader. To reduce this defect to a minimum, Mr. Prunem recommends to let the pictures dry thoroughly before mounting with gelatin. The mounting must be done as soon as the pictures have been pasted with gelatin, so that there will be no time given them to absorb much moisture. It is noticed that in absolute dryness of the picture, the albumen layer is very apt to crack and split, and Mr. Schaarwachter remarks that he always employs weak albumenized paper in order to avoid this latter defect. The paper he uses is doubly albumenized, but so weak that both layers in conjunction combine only the strength of a common single layer. The strength of the paper does not influence its capacity to expand.

A photograph is usually assumed to be absolutely durable when it has been thoroughly washed out, but this assumption does not seem to hold good in all climates. My friend Remelé, the well-known landscape photographer, who has just returned from a voyage on the South Seas, writes me on this point as follows: "I printed many pictures on board ship, and used at first to mount the same, until I found this to be very unpractical; for, apart from the great loss of time involved thereby, the mounted pictures faded extremely quick. The temperature was so moist during the whole voyage that the mounted pictures were always clammy. Securing the pictures in closets and drawers did not help any. The paste between pictures and cartoon became disintegrated very soon and soured, and the pictures became at first spotted, and then faded in a few weeks. Little washing was not the reason for this occurrence, for old photographs which I had brought along in an album, shared the same fate, and the greater part of the unmounted pictures did not fare much better; but this was also not due to insufficient washing, but was exclusively caused through the destroying influence of the damp, salty sea-air. This sea-air destroyed in time also the unmounted photographs, but only when the sheets were not put away properly. Simply placing the pictures between two sheets of a large book, was in no way sufficient. In a few months the prints became spotty, and in half a year they had faded. If the pictures are at once dried again upon receipt, rolled around a cylinder, and placed in a tin box, they keep very well indeed.

In conclusion, I will give you a new method to test the Nelson developer: I mentioned already on a former occasion that the effectiveness of the Nelson's developer for dry-plates depends materially on the proper strength of the ammonia, and recommended for testing of the same the weighing off of 100 c.c. of the ammonia. The weight of the latter must not exceed 92 grammes, for if it weighs more it is too weak. The ammonia solution, Nelson No. 1, however, loses strength through evaporation, and it therefore may occur that a developer which had worked well at first, proves unfit for use some time later. The expert dry-plate operator remedies this by adding fresh ammonia, drop by drop, but a mistake is hereby readily made, and an expedient to test Nelson's ammonia solution No. 1 as to its proper strength is therefore very desirable. I recommend as such, oxalic acid solution. Weigh off carefully six grammes of chemically pure crystallized oxalic acid, put it in a measure, dissolve with about 60 to 70 c.c. warm distilled water, and dilute, when everything has been dissolved, to 90 c.c. This liquid is kept in a well-corked bottle. For testing the Nelson developer No. 1, as to its proper strength, measure off in a small measure of ten c.c., which is divided into one-fifth c.c., one c.c. of the solution to be tested, add to it five c.c. oxalic acid solution, throw in a little bit of litmus-paper and shake well the securely corked measure. The litmus-paper must be colored blue; when it is colored a durable red the developer is too weak, and a drop of ammonia is then added, then another drop, till the litmus-paper become blue, when the measure is shaken. In this way the number of ammonia drops required to be added to one c.c. of the solution, in order to impart to it the proper strength, is established.

Dr. H. Vogel.

Berlin.

Editor's Table.

Our cover outline this month is from a very gracefully-posed promenade picture sent us by Mr. Billings, Racine, Wis. It happens to be one of the best subjects for reproduction by Mr. Ives' process that we have yet had, and is a gem in every respect. We wish everybody had the photograph for comparison.

Pictures Received.—From Mr. A. C. Hopkins, Palmyra, N. Y., a pretty cabinet pose of a child in a hammock. From Mr. E. G. Sawtelle, Biddeford, Me., cabinets and boudoirs of young ladies, and one of a pretty young miss in a swing. From Mr. E. D. Ormsby, Oakland, Cal., a fine portrait of himself. From Mr. F. A. Hartford, operator at Nichol's gallery, Rutland, Vt., a finely managed portrait of a gentleman. From Mr. A. P. Allen, Gardner, Mass., a parcel of photo-lithographs (artotypes) of excellent quality and finish, which do him great credit. From Mr. Theodore Joop, Bomberg, Germany, a splendid cabinet of himself and a noble dog. From Mr. F. C. Weston, Bangor, Me., cabinet photographs of various sexes and sizes, carefully made. From Mr. W. H. Partridge, now at the Morse Gallery, San Francisco, two very fine cabinets of a young miss. From Mr. C. A. Stacy, Lockport, N. Y., a memorial cabinet photograph, with appropriate mottoes of the Martyrs of our country, Lincoln and Garfield—one of the best things we have seen of the kind. From Mr. G. W. Taylor, Sycamore, Ill., two cabinets from negatives made on his excellent emulsion plates advertised this month. They leave nothing to be desired, and are fine.

Items of News.—The *Photographic Amateur*, by Mr. J. Traill Taylor, and published by the Scovill Manufacturing Company, is ready (50 cents) and is reviewed elsewhere. We regret to learn that the establishment of Mr. L. A. Weller, Austin, Nevada, was destroyed by fire on September 15th, together with his dwelling, causing a loss of $5000. He will soon rebuild. Mr. W. Wykes, Grand Rapids, Mich., recently was awarded two "first premiums" at the art exhibition in that city; one for "the finest collection of photographs," and the other for "the best three cabinets." Mr. W. L. Wilson, Mr. Wykes' chief operator, is a progressive man. We learn, with regret, that the great cyclone which visited Quincy, Ill., last month, did a great deal of damage to the building of Mr. J. H. Smith, the well-known stockdealer of that city. Mr. H. C. Norman, Natchez, Miss., an old subscriber, has sent us a pamphlet of nearly one hundred pages, describing the beauties and advantages of that city, and mentioning among its attractions his studio and work.

Wilson's Photographics.—Up to this writing eight hundred and eighty-two copies of this already popular work have left the editor and publisher to go out on their mission of usefulness. In their place many kind words of appreciation come back, but we only have space for a few of them here. A whole round of them may be found in the advertisements: "Your *Photographics* will supply a want long felt among the fraternity, more especially among those like ourselves, who are 'out of the world,' so to speak." — J. R. Hanna, Auckland, Australia. "One hundred dollars would not buy mine if I could not get another. I do not see how I managed so long without it."—Oscar Cromwell, Grizzly Flat, Col. "*Photographics* suits me better than any similar work I have come across, the giving of the experience of different workers on the same subject, and giving it in their own words, being an especially valuable feature."—S. B. Hill, Flemington, N. J. "Your *Photographics* is the best thing out: practical and to the point, and no nonsense."—Walt. C. North, Utica. N. Y. "I like *Photographics* ever so much; it is immense, and far ahead of anything of the kind ever published before. Easy to understand and all in a nutshell, you might say. I hope you may sell copies enough to repay you for your labor."—D. P. Barr, San Antonio, Texas. "*Photographics* is the finest work of the kind I ever saw, and it cannot fail to fill an important place in photographic literature."—F. C. Weston, Bangor, Me. "I had intended to have written you in regard to *Photographics*, but have been too busy to do so. I think you deserve great credit for the able way in which you have presented it; in my opinion it is the best text-book published, and ought to be in the hands of every photographer. You not only give your own ideas, but have utilized and condensed those of others. The *Philadelphia Photographer* grows better and better; may it ever prosper is the wish of your friend."—Frank Thomas, Columbia, Mo. "Please send three copies of *Photographics*. I have no doubt that my prophecy that a second edition will be required will be fulfilled with your book, as it is complete and thorough, and will meet the wants of all. Shall push it this winter."—D. Bachrach, Jr., of Bachrach & Bro., Baltimore, Md. "*Photographics is just the thing* for me, I can tell you, and I shall recommend it every chance I get."—Geo. H. Johnson (amateur), Bridgeport, Conn.

Messrs. Chas. Cooper & Co., New York, favor us with their monthly price list, and an announcement that they now manufacture refined wood (or methylic) alcohol, which answers all mechanical purposes for which grain alcohol is used, such as burning, dissolving shellac, polishing, etc. Two qualities are made.

We are supplied with copies of our January, 1880, issue, but still offer one dollar "in trade" or seventy-five cents cash for August, 1880. Send all you can.

The *Monthly Index* says: Photographers who wish to keep up with the times, should take the *Philadelphia Photographer*, the best journal in the world devoted to their art.

Catalogues.—Messrs. Mullett Bros., Kansas City, Mo., have issued a very well arranged priced catalogue of 104 royal octavo pages, which is a great credit to them, and will be a great convenience to their patrons.

These "brothers" are doing a good business, and they know how to bring it to their "headquarters."

Dr. R. Shelton Mackenzie, the veteran editor who wrote the first article in our volume i., says, in the *Evening News*, Philadelphia, of which he is the literary editor: "The *Philadelphia Photographer*, conducted and published by Mr. Edward L. Wilson, has fully sustained the reputation it won nearly eighteen years ago as a reliable and instructive organ of a most interesting and important department in which science and art are blended. It is distinguished above all others of its class for its plainly communicating information to its readers. In the number for August, just issued, there are several instances of this. For example, here is an important paper by M. Lierert, of Paris, suitably illustrated, on the facile and successful operation in which the electric light is used for portraiture and a report of portraiture and printing by the same power as exhibited a few weeks ago in the east of Scotland. Among the general topics are the correspondence from Berlin by Dr. H. W. Vogel, the world-famous scientist, and from Paris by Leon Vidal. There are several pages, too, of valuable society gossip. The photograph for the month is a valuable artograph (not autograph) study by Mr. William Osborne, printed from negatives supplied by Gilbert & Bacon, of Philadelphia."

The principal attraction of the New York Exhibition was undoubtedly the collection of emulsion negatives, and prints therefrom, executed by Mr. John A. Scholten, St. Louis, Mo. No such grand show was ever given to photographers at any previous exhibition. They were glorious studies for the craft—splendid works of art—magnificent in technical results. The glacé of the prints attracted much attention, and Mr. Scholten gave us his method last month on page 318. Soon "Our Picture" will be printed from some of his glorious negatives. Alas! that nearly all the rest were broken on their way home.

Photographic Mosaics, 1882, for about one week longer will welcome contributions to its pages. It is rapidly filling, and will be an admirable issue. Among the other good things which it will contain is a practical article on retouching the negative by Prof. Barthold Meyer, of Chicago, who will also soon supply another for these pages.

Mr. H. A. Hyatt, St. Louis, Mo., is one of the most enterprising stock-dealers of the Southwest, and calls attention this month to his advertisement of photographic stock. A long acquaintance with manufacturing and selling photographic necessities in New York city and the West, enables him by superior knowledge to cater better for the interests of his patrons than many others. Take care to read his advertisement, obtain his catalogue, and give him a trial.

Mr. F. B. Clench, Lockport, N. Y., has opened a "School of Amateur Photography," and offers his services as teacher. His circular is a strong argument for amateurs to join hands with our art. Success to his efforts.

Mr. Wm. H. Walker, Rochester, N. Y., issues a very pretentious pamphlet, which he calls the *Photographic Amateur*, by means of which he also tries to inveigle the uninitiated into the wily embrace of our art amateuric. We wish success to all such efforts.

Look out for Him.—We publish the following by request:

"A photo tramp, of German extraction, about 25 or 28 years of age, light complexion, blue eyes, medium height and size, and claiming the name of Lewis Sanders, is a first-class dead-beat, liar, embezzler, and drunkard, and parties taking him into their confidence will be apt to regret it. He is wanted at Ripon, Wis., to answer the charge of embezzlement."—Wm. Lockwood, Ripon, Wis., September 27th, 1881.

The fault found with Ex-Local Secretary Seavey by some of our New York friends—the address of Mr. O. G. Mason to the Convention, etc.—has induced him to correspond with the leading photographers in New York city to find out if any conduct of his towards them was the cause of their indifference towards the visiting photographers and the enterprise they had in hand. He is responded to by Messrs. Mora, Sarony, Rockwood, Jordan, Bogardus, Alman, and Anderson, and sends us copies of their letters, which are published in full in the *Photographic Times*. All these gentlemen assure Mr. Seavey that he was not in the least responsible for their actions; that he did all in his power to persuade them to exhibit, but that they could not find it convenient to do so. Some were away, others could not spare their specimens, and one was in Europe. All declare that the assertion that they were "offended by Mr. Seavey" is an error, and that their absence was due to "a general lack of interest." Thus Mr. Seavey is vindicated on that score. He assures us that he advertised the Exhibition in a number of the daily papers, hoping thus to secure interest enough to have the proceedings reported, but no attention scarcely was given—another evidence that it was lost in such a crowded city. When, on page 332, we say, "Mr. Seavey did a great deal to demoralize," we only mean that there never was a local secretary who pleased all, and Mr. Seavey was no exception. The visiting photographers saw there was "something the matter," and, of course, attributed it all to the local secretary, to whom—thanks.

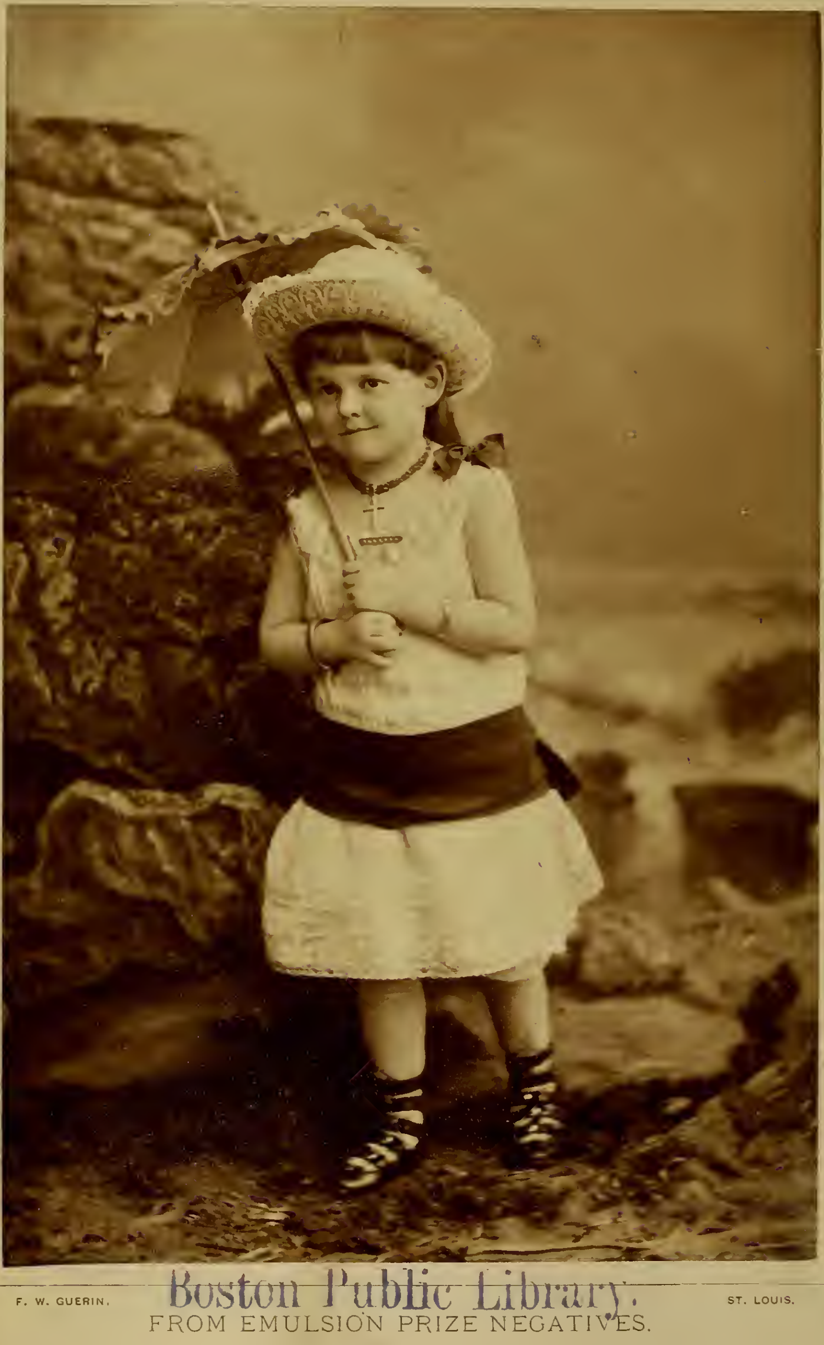
A Splendid Posing-chair, made by Mr. C. A. Schindler, West Hoboken, N. J., was shown us a few days ago. It is made after a model so carefully contrived that it coerces even the most awkward sitter into a graceful pose, thus helping the work of the poser very much. It is upholstered elegantly, too, and tastefully, and will be found a most useful addition to any fine-art studio of photographers. Mr. Schindler's advertisement will be found in proper place.

Professor A. Cichi, of Santa Clara College, California, writes in a private letter as follows: "The last number of the *Photographer* has superb photographs. If you would almost every month give such a treat, you would benefit not only photographers by profession, but amateurs as well, and all those who love the photographic art. We possess in our college a photographic gallery, and also hold a class. The pupils take great interest in your magazine." We are pleased to hear such words of encouragement from one so well qualified to judge of our journal.

We have received from Mr. W. P. Gerhard, Sedalia, Mo., an example of negative retouching, accompanied with a proof from the same not retouched, showing how much the artist's hand has done for the good of the negative.

From Bachrach & Bro. we have received an extra supplement to their price-list for July, August, and September, and notice of their removal, on September 1st, to their new building at the southeast corner of Eutaw and Lexington Streets. These gentlemen are bound to prosper, despite all opposition, and their circular above alluded to will be found useful to buyers, as it contains many valuable points.

Mr. C. F. Rice, No. 220 Wabash Avenue, Chicago, sends us a copy of his September catalogue of frames, mouldings, and picture-goods, etc.—144 pages, finely illustrated.



F. W. GUERIN. ST. LOUIS.

FROM EMULSION PRIZE NEGATIVES.

Boston Public Library.

THE

Philadelphia Photographer.

EDITED BY EDWARD L. WILSON.

Vol. XVIII. DECEMBER, 1881. No. 216.

NOW FOR 1882.

Happy New Year to You, One and All.

That much being done, permit us to say a word for ourselves.

With our next issue we begin the nineteenth year of our life as the editor of the *Philadelphia Photographer*. Few men in any department of science are allowed or content to labor so long in one line, and for one constituency so small as ours. It has taken a great deal of love to hold on so long, and whenever we have been tempted to let go, all the fascinations of our art would loom up before us like a "pillar of fire," and prevent us from deserting our post. We propose, therefore, to begin another year, and come to you with our usual solicitations for patronage, backed up by an array of promises to be fulfilled in return.

All the features which have always distinguished the *Philadelphia Photographer* from its contemporaries for so many years, will be preserved, and many new ones added.

An intimate co-worker will, during the year, make a journey in parts of Europe, Asia, and Africa, and give our readers, each month, such bits of photographic and art information as he may be able to gather on the way. His letters will be illustrated and valuable, we believe.

Our Pictures are under way for months ahead, and will each and every one be a gem of photography.

The January number will be graced by two pictures, in different positions, of two sprightly misses, beautified by two of Mr. Osborne's "foreground designs." The long-promised Parisian pictures, eleven in number, will appear in February, with interesting sketches concerning the famed photographers who made them, by Mons. Leon Vidal. In March, Mr. John A. Scholten, of St. Louis, will claim our admiration for nine examples of his unrivalled photo-statuary from living subjects. April will be devoted to nine "composition" landscape pictures, with figures, from the splendid 14 x 17 productions of Mr. H. P. Robinson, the well-known author of *Pictorial Effect in Photography*. The landscape season will be given a further help in the shape of a fine view in Colorado, from emulsion negatives by Mr. Wm. H. Rau, in the May issue. Messrs. Gilbert & Bacon will probably claim the June issue, unless Mr. J. E. Beebe steps in between, and, according to promise, surprises us with a grand child picture. And so on through the year gem after gem will follow.

Already some of our back numbers for 1880 and 1881 are in demand at a premium.

Will it not be prudent to subscribe *now*, in order that this year's copies may be secured? It would be a great favor to us, too, for it gives us opportunity to fix our books early, and to go on with the year's work to the better advantage of us all.

The *Philadelphia Photographer* now stands confessedly at the head of photographic journalism in all that makes a thoroughly complete, general photographic newspaper. It is more complete in its news, in its special correspondence, in its varied contributions on all subjects of popular interest, and in all the qualities of a newspaper for the photographer and for his business, than any of its contemporaries, because its facilities and resources are equal to every want of a first-class international journal.

The *Philadelphia Photographer* was never so widely read as at the present time. It has steadily extended its circle of readers in every State and Territory, and all over the world, and it is now larger than ever before, and not equalled by any other of its class in the country.

It has nearly doubled its former large circulation during the present year. Its contributors are among the foremost men of the art all over the world, and no department is slighted in any number on any pretext. It is adapted as well to the amateur as to the more practical. In all departments the pens of the best writers are engaged, while selections from other journals are made with care, taste, and fulness that are unsurpassed. The correspondents of the editor are at every news centre, embracing all American and European capitals, and they are charged to spare no labor or expense to give our readers the best and earliest accounts of matters of current interest in every department of the world photographic. In addition to the regular correspondence thus provided, this journal is chosen by many of the most eminent men of the art as a medium of communication with the public. All departments will be kept fully up to the standard of former years. Subscribe *now*, and fill us up a generous *order-sheet.*

STUDY.*

BY J. H. WARRINGTON.

I CONCEIVE one of the greatest drawbacks to many engaged in the active pursuit of their profession is the want of proper study. There is no department of knowledge in which the means of research are not being developed with astonishing rapidity, and where eager and highly intelligent votaries are not profiting by these adjuncts, and photography is well up to the head of the list in this respect. But how many (alas, too few) are working up a knowledge of these advancements, and keeping pace with the times?

During the past summer ill health compelled my leaving home and going to new scenes, and when opportunity offered, I paid my respects to those professional gentlemen in whose vicinity I happened to be. One, an old and very valued friend, who has always stood very high in the profession, showed me a barrel full of spoiled prints, complaining that he had not been able to make a marketable print for a long time, and asked for assistance. He stated that, fearing that it was in the toning-bath or hypo (the latter's back must be pretty well indurated by the many stripes it has received), he had sent part of a batch to a neighbor to tone and fix with his own, but the same result, and he was now about to give up in despair. I asked him how strong a silver-bath he used. From fifty to sixty grains. All right—acid or alkaline? Decidedly acid. Did you ever try neutral or alkaline bath? No; it would not work. Indeed, I said; I always had thought otherwise. I went to the bottom of my sack, which I had with me, and brought out Wilson's *Photographics* (it is well my medical adviser did not see it, as all study had been tabooed), and turning to the chapter on silvering paper, I showed him where a neutral or slightly alkaline bath was strongly recommended. This he read, and his attention being called to the use of alum in the bath, his eyes opened. The result was he said I could not take that book home with me—he must have it. I gradually ascertained, to my astonishment, that this gentleman never read anything—never took any of the journals (had not since Humphrey's was published); and here he was losing more money than would have cost him for a regular subscription to the leading journals. I am very much inclined to think that hereafter he will be a reader and thinker also.

Now, the fact is, taking the journals is

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*Written for *Mosaics*, but received too late.

right, but not all of the right. They cover a large ground, and notice the discoveries and application of them, but they cannot, and honestly do not, claim to cover all the ground. There are from time to time very excellent practical works published, which it is the duty of every one to read and STUDY. They must not say, I know all about this thing, for verily there does not live one who knows *all* about even any one subject. In conversation with a professional printer, one day, (a man of large experience), he said he did not need to read, as he knew all about it. I had Hearn's *Practical Printer* in my hands, and asked him to look over it and see what he thought of it. He did, and very soon said he must get a copy, as there was much information in it. These are but few of the many instances which I could narrate from personal experience. It may be alleged, with seeming truth, "I can't afford them." Well, Mr. Can't, I can tell you it is a mistake. There is not a book published to-day on any of the branches of photography which will not pay you to buy and study. A single hint which you may receive from any of them will save you from losses involving many times its cost. So I say buy *Photographics*—buy Hearne—in short, buy them all and keep them close at hand. Don't loan them, but let your friend buy for himself. You cannot spare them from your studio, and he cannot afford to be without them.

HOW TO WORK "DRY-PLATES" SUCCESSFULLY.

BY O. PIERRE HAVENS.

IT seems strange any photographer should have the least difficulty in the management of "dry-plates," when we consider the few chemicals used, and such fine results obtained. Now if any of your readers just recollect the change from the daguerrotype to the white slop ambrotype, being a radical change from dry to wet, why dry-plate work is but a plaything alongside of it.

Well do I remember my first ambrotype. It was of a corpse; and well it was, for the *two* days' work, and the result obtained, would have killed my subject anyway, as the corpse stood it much better than I did. Still, among the things used in dry-plate work, is sense enough to have what light you need on the plate come through the *lens* only; this is very important. I have no gas in my dark-room, but this is how I unpack the plates: I take a sheet of ruby paper, and frame it between two glass, say 20 x 24, put a screw-eye in the top and a string in the screw eye; now a small kerosene lamp, sitting behind this framed paper, gives you a fine light. I also have a frame made to fit in the window, covered with two thicknesses of envelope paper, so that all the light I get comes through my framed ruby paper. Now I have six 5-8 holders, and I found an old hand valise (black) that just holds the six holders; I dust the holders and then very carefully do the same to the plates; put the plates two in each holder; put the six holders in my black valise, and put it away until I should need it to go viewing. Now then brains commence. Keep your plate-holder under a cloth, put in position, and roll outside, still keeping a cloth over the whole; when you have made your exposure, put the slide in square to the end, not one corner of the slide first, like a wedge, as one corner put in first opens the whole end of the holder, thus exposing the plate. Again I say have no light touch the plate, only what comes through the lens, and mighty little of that. Now as fast as you expose, be sure and mark that side of the plate-holder with a chalk, or sticking paper, or you may land where I did once, with a fine "tombstone" sitting gracefully in the top of a large oak, in trying two exposures on the same plate. Keep your holder under the cloth all the time after making all the exposures you wish. Deposit your "black bag" in the dark-room, and prepare to develop. Now have prepared a quart bottle of saturated solution of oxalate of potash, and the same of pure sulphate of iron (it comes very nicely pulverized), and an eight-ounce bottle of solution of bromide of potassium, twenty grains to the ounce. Now take a four-ounce graduate and a one-ounce graduate, and in the four-ounce graduate put three ounces of the potash solution, being sure that it is perfectly clear, and one-fourth ounce of the bromide solution also.

Now in the one-ounce graduate put one-half ounce of the iron solution, care being taken that all of the solutions are clear and clean. Now take the plate from the holder, and never let your hand or finger touch the back of plate at any time, as that makes uneven development, by warming the gelatin film. Place it in a 5x8 dish, and pick up your four-ounce graduate, and add just half of the iron solution to it, and flow over the plate; you will find the development slower than the usual wet process. Don't touch the plate to look through it, but should the development be very slow, pour off the developer and add the balance of iron, and flow again, but keep your "hands off." Develop until you think it looks fine, and then develop until you think it has gone overboard. The reason for not adding all the iron at first is, you may be overtimed, and less iron saves your negative; if undertimed, you can easily add more, and if timed just right, the quantity is enough. This you will find very important, as too much iron will precipitate and produce sanded negatives. Use as little iron as you can, and get the detail out. Now wash and fix in hypo same as wet plates, but don't bring your negative to the light until you are sure it is fixed. Look at the back closely; now wash and bring on your light if you wish; now wash in a solution of alum water, wash again and dry; use no heat on the plates whatever. That is my way of working, and I have the assurance of Mr. Roche that my plates are A No. 1. And if any artist will follow my simple formula, I don't see how it is possible for him to make a failure. Again I say, have what light you need on the plate come through the lens.

HOW GELATIN WORKS CHEAPLY WITH ME.

BY MAC.

I DO not claim to be able to give my brother photographers better formula than they now have, but hope the following dodges may be of use to some, like myself, whose purse does not equal their desire to give the new method a fair trial.

We will suppose that the operator has prepared his emulsion by whichever formula he prefers. He now needs something to level his plates on while coating. The following method, I think, is simpler than any I have seen in print: Nail a piece of plank or board, say eight inches wide, against the wall of the room; see that it is plumb. About seven or eight feet distant jamb a similar piece between the ceiling and floor, or nail against the opposite wall if it suits. You now require two pieces of inch board about eight inches wide and long enough to reach between the two uprights. Those two pieces must be planed straight on the edge. Fasten one end of one of them to one of the uprights at a suitable height, say four feet; level it *carefully*, and nail to the other upright. Now put the other piece against the other side of the uprights; lay the level *across* the ends and nail. You now have a rack that is level in every direction, and as the plates only touch the edges of the boards, any lump or unequal thickness of the plates will not do any harm, unless they should happen to be at that point.

When you have coated the rack full, those at the first end will be set on, and may be stood in the ordinary drying-rack, which, when full, is stood in the drying-box to dry. The drying-box is made as follows: A packing-case, large enough to hold the rackful of plates, is taken and papered inside and out with thick, brown paper. The end slips in and out to admit the rack with the plates. The circulation of air is secured by taking a piece of eight-inch stove-pipe about a foot long and fitting a tin cap on both ends, with a two-inch tin pipe in each cap—the bottom pipe two inches and the top pipe about fifteen inches long. The lower pipe is fitted through the top side of the drying-box at the end away from the door, and the lower cap is tacked to the box to keep it in place. When you want to use the box lay a false bottom on the cap, arranged to let the air pass without admitting any light. On this set the lamp with an Argand burner, and set the piece of stove-pipe and upper cap over it, the chimney of the lamp entering the pipe in the upper cap. I forgot to say the door had two or three holes in it and the light was kept out by pieces of bent ferro. plates. The air drawn through the box by the lamp causes the plates to dry very quickly. Plates dry much quicker in a vertical than in a horizontal position. The box should not be opened until the plates are dry.

Make developing-trays out of backing-board coated with beeswax and rosin, equal parts.

A lot of cheap dipping-baths may be made by taking a piece of clear inch pine about one inch and a half wide and any length. An eighth of an inch from each edge run two grooves three-eighths deep; make them with a narrow chisel or plow-iron. Cut the strip into suitable lengths, say ten inches for the bottom piece and thirteen inches for each side. Check the bottom piece into the sides the depth of the grooves; slip a pane of 10 x 12 glass into each groove; pour a little of the hot-rosin mixture into the bath and let it run into the corners and grooves. When set, tack a couple of strips of back-board across near the top to keep it together and to lift it by, and you will have a light bath-dish that will not leak, and so cheap that you can afford to have plenty of them for ferrous-oxalate developers, alum, hyposulphite, etc.

HOW TO AVOID BLISTERS.*

BY HENRY LISTER.

(Central America.)

For over a year I have not been troubled with a blister. I am using the N. P. A. Dresden paper exclusively. All that is necessary is to use alum in the fixing-bath. I will herewith give the formulæ I have been using for over a year:

Printing bath, fifty grains, slightly acid, with C. P. nitric acid; when foul add one-half drachm liquor ammonia, sun a few days, filtering. I do not fume, and have no trouble with bath or paper.

After printing, I wash in rapid changes of water until the water remains perfectly clear, then in acetic acid one drachm to one quart of water, until the prints are evenly reddened, then in three changes of water; tone, wash in two changes of water, then fix in

Hyposulphite of Soda, round handful.	
Water,	2 quarts.
Alum (dissolved in warm water),	2 drachms.
*Anilin blue (1 m. to oz. solution)	1 "

Fix from ten to fifteen minutes; wash through three changes of water, then from five to ten minutes through † acetate of lead water, then through three changes of water; drain all prints on a sheet of glass; place between blotting paper, with light pressure, for about fifteen minutes; take out, place in pile under light pressure, and mount at leisure.

As to the alum, I read so much about it that I concluded to try it in the fixing-bath in place of bicarbonate of soda, and find it works admirably; never a blister.

Collodion does not keep any length of time here, in Central America, so I always make my own in batches of from two to eight ounces. The formulæ I prefer are

No. 1.—	Ether and Alcohol, each,	½ ounce.
	Double Iodide Cadmium and Potassium,	5 grains.
	Double Bromide,	2½ "
	Cotton,	5 to 6 grains.

This I make in eight-ounce batches, and

No. 2.—	Ether and Alcohol, each,	½ ounce.
	Iodide of Lithium,	5 grains.
	Bromide of Lithium,	2 "
	Cotton,	5 to 6 grains.

This I make in two-ounce batches.

Always dissolve the salts in the alcohol, then add the cotton, and finally the ether.

No. 2 has to be kept wrapped up in the dark.

For children, I take one-half ounce of No. 2 and one-half ounce of No. 1. Under ordinary circumstances I get a negative in five seconds; although with intensifying I can make a negative in three seconds. For general portrait work I use No. 1; it is also very fine for ferrotypes. Double iodides and bromides I prepare myself by taking their equivalents. As for the developer, I use the iron developer only, viz.:

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* Written for *Mosaics*, but received too late.

* The anilin water blue I keep in stock, dissolving one drachm in four ounces of water; for use, one minim to each ounce of fixing-bath. (*Mosaics*, 1880, page 106; *Philadelphia Photographer*, January, 1880, page 10; Wilson's *Photographics*, page 222, Notes 284.)

† The acetate of lead I keep in stock; acetate of lead one ounce, hot water seven and a half ounces; for use, one-half ounce to one quart of water. (*Silver Sunbeam*, 1873, page 564; *Photographic Times*, February, 1880, pages 26, 27.)

Water, ...	1 ounce.
Acetic Acid, ...	½ drachm.
Protosulphate of Iron, . .	½ “

Sometimes a little alcohol; filter.

Negative bath, thirty-five grains strong; ferrotype bath, forty grains strong.

I have no baths of less than one-half gallon. I sun, and filter in the sun regularly (*i. e.*, provided there is sun), and never have any trouble.

REDUCTION OF PHOTOGRAPHIC WASTES.*

BY W. L. SHOEMAKER.

THE following recipes are the result of the experiences of many. Some of the notes are very important. If followed closely you may, as I have many times done, reduce photographic wastes to $\frac{982}{1000}$ fine.

PAPER CLIPPINGS.

Burn the papers to a fine ash; then mix with one and a half its weight of the following flux:

Bicarbonate of Soda, .	1 pound.
Pearlash, ...	1 “
Common Salt, . . .	4 ounces.

Pack very tight; have all the fluxes well pulverized before mixing. After the mixture becomes liquid in the pot add additional quantities in small lots; if it effervesces add common salt; it settles it promptly. Just before removing the pot from the fire add a little pinch of willow-charcoal. This will clear the flux of any little globules that may hang in it.

FOR CHLORIDE OF SILVER.

Filter; wash on filter well, dry, and mix with one and a quarter its weight of flux

Bicarbonate of Soda, .	1 pound.
Cream of Tartar, . . .	4 ounces.

Pack tight; do not add any to the pot.

SULPHURET OF SILVER.

Dry; pulverize in a mortar; then roast on shovel at a low heat until flame ceases; stir occasionally; mix with one and three-quarters its weight of flux

Bicarbonate of Soda, .	½ pound.
Pearlash, ...	1 “
Nitrate of Potash (refined),	½ “

See that the flux contains no lumps; have it well pulverized; pack the crucible not quite full, and merely shake it down. Additional quantities may be added to the pot before it becomes liquid. Add salt if it effervesces.

FOR DEVELOPER (DARK-ROOM WASTES).

Dry; roast on shovel until the sulphur is thoroughly burned off; place the reddish-brown powder in an evaporating-dish; pour on common muriatic acid; apply a gentle heat for at least ten minutes. This dissolves the iron, and leaves the silver as a gray powder. Dry; mix with one and three-quarters its weight of flux

Bicarbonate of Soda, .	1 pound.
Pearlash, ...	1 “
Common Salt, . . .	1 “

GOLD FROM TONING-BATHS WHICH HAVE BEEN PRECIPITATED WITH IRON.

Dry, and roast on a shovel for a few minutes at a dull heat; then put the reddish-brown powder in a cup, and pour on *pure* muriatic acid, and apply a gentle heat for five minutes. This dissolves the iron, leaving gold and silver as a precipitate. Pour off the iron solution; wash well; dry, and melt by mixing with five or six times its weight of pearlash.

The fire should be fresh and clean before each pot is inserted.

Pack the pots, and set in a bucket of water near to the top of the pot—be careful not to wet the flux; leave in water a few minutes, then place in fire.

Have another pot inverted (with the bottom knocked out) as a lid to cover the pot while in the fire. After melting leave pot cool and crack open for the button. When all the buttons are collected place them in a pot; after melting add a little at a time of willow-charcoal until the surface is clean.

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* Written for *Mosaics*, but received too late.

Then pour into a bucket of clean water; slightly agitate the water while so doing. This will give you the metal in a fine, granulated condition that tests easily; or for making nitrate of silver.

PHOTOGRAPHIC MOSAICS, 1882.

The issue of this useful little annual becomes as much a part of our work every year as the supplying of the closing number of each volume of our magazine. And this year we send it out to its expectant readers almost a month earlier than usual. At this writing nearly *three thousand copies* are "on their way rejoicing" to those for whom they were printed.

It is the eighteenth time we have intruded thus upon the readers of photographic literature with *Mosaics*, and *this* time we have introduced some rather new features, which we believe will be acceptable and useful.

The full list of the contents is given in the advertisement on the fourth page of our cover, to which your attention is invited.

It would be immodest in us to say one word in commendation of *Mosaics*, were it not that a great many of the gems which compose it came from such of our generous co-laborers as are always ready to give a helping hand to their less informed co-workers. We are merely the humble workman whose duty it becomes to fit the parts together and make a presentable production for the profit and pleasure of those who become its possessors.

Although we tried hard to print enough copies to supply the demand last year, we utterly failed, and ran out during the summer.

This year we print one thousand two hundred and fifty more copies than in 1881. It looks as if *they* were to be taken up soon also.

The wise ones will order early, and thus as early reap the advantages of its contents as your neighbors do. A number of "overflow" articles are given on other pages. A few copies of previous dates of *Mosaics* can be had.

Only think—144 pages of the *best* photographic reading for fifty cents.

WRINKLES AND DODGES.

A Vermont Retouching Varnish.

I have been retouching on negatives and prints for a number of years past, and lately almost altogether on negatives.

My *retouching varnish* (for I seldom grind the surface) is as follows: Ordinary Damar varnish (such as house painters use) and spirits of turpentine in equal parts; rub on with the tip of the finger until dry. It can be used to best advantage, I find, with a *soft metallic pencil*, which I use altogether, or a Faber's anywhere from three to six H.

Sometime in the future I shall have an article for you on negatives, but not now.

F. A. Hartford,
Rutland, Vt.

Your Leaflets and my Collodion.

The "Leaflets" have been of decided benefit to me; I consider them the best advertising medium I have yet found. The merchants who advertised in them seem to be of the same opinion, one of whom went to the expense of sending a man and team to distribute them in an adjoining town. I shall undoubtedly want more when these are gone. I got $13.50 from the advertisers, making 1000 "Photographer to his Patrons" cost me only $1.50.

I am using a collodion that is the best and most reliable I have ever used. It is good immediately after making, and improves with age. The formula I got of a mysterious tramp that passed through here. It may be old and well known, but I never have seen it published. It is as follows:

Plain Collodion, . . .	as usual.
Iodide of Ammonium, . .	4 gr. to oz.
Iodide of Cadmium, . .	2 gr. to oz.
Bromide of Calcium, . .	1 gr. to oz.

L. B. Truax,
Swanton, Vt.

Photography upon Celluloid.—Following the example of Fortier, who at some former date tried to employ celluloid in place of glass plates, David modified his method as follows: He presses the celluloid under a hydraulic press at a pressure of 150 atmospheres.

Fortier improved this process still more, by pressing in heated condition, letting the celluloid cool off while in the press. When being pressed, the matter must be between porous plates, not metal plates; but the matter obtained thus does not equal glass in regard to clearness, and the price is too high yet.

PORTRAIT PHOTOGRAPHY AND PAINTING.

Enterprising photographers are in the habit of visiting art exhibitions at which portraits by renowned artists are exposed; and we have noticed many even making sketches and acquiring photographs of the pictures, in order to study the same. At the same time they also pay much attention to *genre* pictures, and study the grouping and posing. We can only applaud their doing so. It is a good plan.

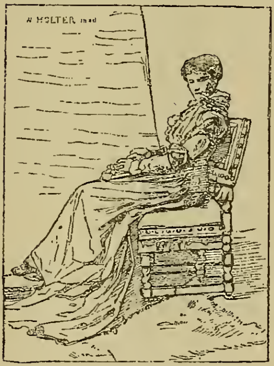
Fig. 1.

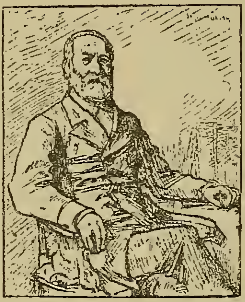
Fig. 2.

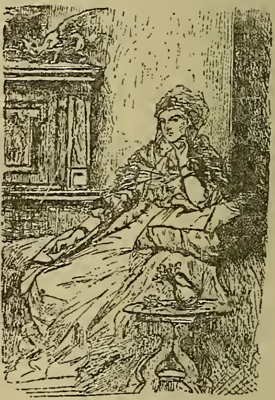
Fig. 3.

The painter, as true artist, follows his intuitive taste, which usually serves him as a sure guide; besides, his work is the result of mature study, and not the work of a few minutes, which the photographer has at his disposal in taking portraits.

Who, however, visits picture-galleries in the hope of *finding* extraordinarily original poses might find himself disappointed.

The poses selected by painters are mostly simple and natural, and therefore, in most cases, the more effective for it.

The painter can obtain effects through coloring, modelling, and drawing, form and arrangement of fancy backgrounds, etc., with the most unassuming pose; and he is, furthermore, unhampered by considerations of perspective, bad drawing, and imperfect objectives.

We are privileged to show our readers a number of photozincographs of last year's illustrated catalogue of the art exhibition at Berlin, which are adapted to illustrate our above remarks on the subject.

At first, the arrangement of the figure. Photographers are in the habit to place the figure so that the head forms about the centre of the picture. Painters do not always follow the same rule; in some pictures we find the head quite removed from the centre of the picture (see pictures 1, 2, and 3), and they do not care much to fill out sufficiently the empty space. In No. 3 this is most liberally done, but in No. 1 there is in the original only a dark drapery occupying the left side. Yet nobody seemed to notice this bareness, for the brilliantly-painted figure attracted the attention of the spectators to such a degree that all the surroundings were forgotten.

It is a general rule with photographers to turn the head somewhat from the direction of the chest, by which more life and movement are given to the picture.

But unfortunately this is often overdone; we have seen pictures in which the chest was almost *en face*, and the head almost in profile.

This looks too much forced. Painters are in this respect much more cautious; they turn the head only slightly from the chest, as the above figures illustrate.—*Photo. Mittheillungen.*

POSITIVE PICTURES ON GELATINO-CHLORIDE.

(Continued from page 337.)

It is only necessary to give details respecting the two developers already referred to, the most generally useful of these being that containing ferrous citrate; and when the following directions are carried into practice, a developer is obtained which is well adapted for general use.

A solution of 600 parts of commercial citric acid in 2000 parts of water is prepared, a gentle heat being employed to dissolve the acid; and the liquid is next neutralized, or rather made very slighly alkaline with ammonia, about 300 parts being required for this purpose. Red litmus-paper should be slowly turned blue by the solution at this stage; but if, by inadvertence, too much ammonia has been added, this excess may be readily removed by heating the liquid until the superfluous ammonia has been driven off. The solution in this condition contains, then, the neutral citrate of ammonium, or this salt with a mere trace of ammonia in excess. The next step is to dissolve 400 parts of citric acid in the solution, and to make up the volume of the liquid to double that of the water first used, about 400 parts of water serving for this purpose. The acid solution of ammonium citrate thus prepared keeps well, and, therefore, a considerable stock of it may be prepared, a trace of mouldiness on the surface being of no importance. The formation of this mould may, however, be prevented by the addition of a few drops of carbolic acid.

The standard solution of ferrous sulphate is next prepared by dissolving one part of the crystallized salt in three parts of water (about one drop of sulphuric acid being added to each four ounces, in order to prevent the deposition of a basic sulphate). It will be readily understood that this solution should be kept in a closely-stoppered bottle, as, when oxidized to a notable extent, it would obviously be unfit for use. The above solutions are mixed, when required, in the following proportions, the small proportion of chloride of sodium being added as a restrainer:

Ammonium Citrate Solution, . .	90 vols.
Ferrous Sulphate Solution, . .	30 "
Chloride Sodium Solution (1–30), .	6 "

The operation of development is conducted just as in the case of a gelatino-bromide plate, and the image should acquire the necessary intensity in five or ten minutes. Several plates may be successively developed with the same solution.

As sodium chloride is a very powerful restrainer, care must be taken not to increase the proportion unduly, but at the same time it is interesting to observe that a notable increase in the quantity of this salt present in the developer causes the production of blacker tones than when only a normal proportion is used. Some other soluble chlorides may be employed instead of the sodium compound, but no advantage appears to result; the soluble bromides are, however, much more energetic restrainers than the chlorides.

A large increase in the proportion of the ferrous sulphate solution retards the development, and gives pictures in which the image appears to be more deeply seated in the film than when the ordinary solution is employed; while an increase in the proportion of the ammonium citrate solution has but little effect, excepting to occasion a somewhat darker tint. The effect of diluting the developer is to diminish its activity, and thin images generally result.

The addition of gallic acid to the developer leads to the production of sepia-brown or dark olive-brown tones; the former being obtained when the non-ammoniacal emulsion is used, and the latter in the case of the ammoniacal emulsion. When gallic acid is used, the developer may be made as follows:

Ammonium Citrate Solution, . .	90 vols.
Ferrous Sulphate, ...	30 "
Sodium Chloride (1 and 30), . .	6 "
Gallic Acid (1 and 10), . . .	10 "

The gallic acid developer acts more energetically than the ordinary developing solution, and the exposure may be consequently reduced to the extent of one-third.

The fixing of the pictures is best performed in a tolerably dilute solution of sodium hyposulphite, one part to ten or twenty of water being a convenient strength.

A form of the hydro-kinone developer which Dr. Eder and Captain Pizzighelli recommended, is prepared as follows:

Water,	100 vols.
Alcoholic Hydro-Kinone Solution (1 and 20),	4 "
Sodium Chloride Solution (1–30),	12 "
Ammonium Carbonate Solution (1 and 30),	20 "

This is considerably slower in its action than the iron developer previously described, and an exposure of three or four times the usual length is advisable. Another point to be remembered is the circumstance that pictures developed with hydro-kinone are very much more reduced during the operation of fixing than is the case with pictures developed by means of iron; and it is consequently necessary to carry on the action until the picture appears much denser than it should ultimately remain.

The hydro-kinone developer yields, in the case of the non-ammoniacal emulsion, very fine yellowish-red or bright-red tones, well adapted for lantern transparencies, or for transparencies intended to be used in making enlarged negatives, while the ammoniacal emulsion gives greyish-red and unartistic tints. An ordinary gold toning-bath slowly changes the color of the reddish images to highly pleasing violet tints. Should it be wished to obtain more intense images than are yielded by the developer as described, it is merely necessary to give a longer exposure, and to dilute the developer with about an equal bulk of water. A diminution in the proportion of hydro-kinone, and a corresponding increase in the ammonium carbonate, tends towards flatness and fog; a similar result also following any considerable diminution in the amount of sodium chloride present. Any considerable increase in the proportion of sodium chloride or of hydro-kinone, is undesirable, the former leading to extreme hardness and deep ruby shadows, while the latter causes a greenish fog to form over the transparent parts of the picture. A simple addition of more carbonate of ammonium is useful in case of under-exposure, but the results are not nearly so satisfactory as when the correct exposure has been given, and the normal developer used.

As a rule, the gelatino-chloride pictures tone with some difficulty, an ordinary neutral gold bath acting with extreme slowness; but the following answers very well in all ordinary cases:

No. 1.—	Water,	500 parts.
	Ammonium Sulphocyanate,	20 "
	Sodium Hyposulphite,	1.5 "
No. 2.—	Water,	500 "
	Chloride of Gold Solution (1 and 50),	40 "

For use, equal parts of the two solutions are mixed, and the fixed prints are immersed, but care must be taken not to allow the pictures to remain too long in this bath, or the more delicate half-tones will acquire an unpleasant bright blue tint; by careful watching, however, it is possible to obtain a very considerable variety of tones.

The chloride emulsion process appears to possess very notable advantages over the bromide method for the production of positives on paper, and the paper may be coated with emulsion just in the same way as carbon tissue is prepared, the plain paper being drawn over the surface of the melted emulsion. Another method adapted for the production of small quantities is to rub a glass plate with French chalk, and coat with emulsion. After this has set, a sheet of damp paper is squeegeed down upon it, and when all is dry, the gelatino-chloride paper may be stripped from the glass, the French chalk serving to prevent adhesion.

It is to be hoped that many of our readers will profitably occupy themselves in following out the above described methods of Dr. Eder and Captain Pizzighelli.—*Photo. News.*

THE DANGER OF PYROGALLIC ACID.—In Breslau, a case of itch was treated by the application of a salve of pyrogallic acid, and soon after using it the patient became violently sick, and died four days afterwards. Experiments with rabbits were made, and two hours after the application of pyrogallic acid they were, in many cases, dead. The effect of the pyrogallic acid consists in the fact that it penetrates through the pores of the skin and mixes with the blood, to destroy all the red blood-corpuscles by robbing them of all the oxygen.

OUR LATE CONVENTION.

BY FRANK ROBBINS.

Now that one after another is taking up the cudgel against our late Convention, I cannot resist putting in my oar for a kindly slap at the way the meetings were run. Not that I would wound the feelings of any of those excellent gentlemen who had the matter in charge, for we all know that such a task is a thankless one, and he who does such service frequently becomes the target of abuse. So pardon me; for my penchant is "poking phun."

The members of the old National Photographic Association all remember the dignity and grace with which Father Bogardus presided at Cleveland and at Buffalo, and how orderly, quietly, and earnestly those large meetings were conducted. Speakers were on hand with carefully prepared essays, and all seemed to be working for the advancement of the art. But at New York, what a contrast — we have degenerated. The downward track seemed greased with gelatin, and we all went slipping down it pell-mell (like so many children sliding down a cellar-door), every man on his own pet hobby, but gelatin underneath them all, and a general "go-as-you-please" air pervading the whole.

There seemed to be no stated programme; and if there was, nobody came to time with their essays or speeches. The chronic grumbler was on hand; the parliamentary man was there, who insisted that the roll should be called; even the wily life-insurance fiend smelled the battle from afar, and knew it was a capital place to advertise his company. He watched his chance and popped out upon the platform, with his pockets crammed full of statistics and figures, which he fired at our devoted heads until we were paralyzed. There we sat helpless, hundreds of us whose time was money. We had come there for mutual improvement and friendly intercourse. Some nodded off to sleep, some put on their hats and left abruptly, and still he fired away till he got to seventhly, when a member arose and demanded that he be called to order. Then we held our breath, expecting the soap man to come in next and cry *his* wares, but he didn't; neither did the New York operators, who had promised to show us country cousins how to light and pose. And so the time rolled on, when some one made the startling announcement that we had not been *treated* as we were to have been *treated*. Here we had been in Gotham a whole week without having any fun (such as the Western merchants are wont to have when they come to this wicked city to buy goods). The *Herald* man had not even invited us to dinner, or to play polo. It was a real *emulsion convention*, though, and it *developed* with great vigor, but *irregularly* (too much pyro, perhaps). But the New York corner began to *frill*, next the Chicago end *softened* and *ran*, and now here appears this *comet*, or only an *air-bubble*, perhaps.

WITH THE "DRY" IN NEW MEXICO.

Our train for Sante Fe having been delayed twelve hours by a washout, I was compelled to lay over at the old town of Albuquerque, and seeing a freight train starting down on the A. and P. Railway for this old town of Osleta, I jumped aboard, with the risk of being ordered off by the conductor; fortunately, he allowed me the ride providing I paid my fare, so in an hour after I was landed at what is called the Junction, which is where the A. and R. and A. T. and S. F. Railways branch off, one going west and the other south-west. About half a mile from the telegraph station is the Indian Pueblo of Osleta, or island, being surrounded almost by water, the Rio Grande running on one side and a large acequia or canal running almost entirely around the other sides. We were besieged at once on our arrival by at least a dozen Indian girls, with fruits of all kinds for sale. I at once rigged out my camera and plates (gelatin), and with the assistance of the telegraph operator secured an excellent group of them on a hill, with the town as a background in the distance. Our success inspired the telegraph operator, who at once volunteered assistance in getting some striking pictures in the town of Pueblo. So we started over at once, and were soon surrounded with a very sociable crowd, all of them chattering and laughing at us. One old fellow invited us to *entree*, which we did, entering a very clean adobe dwelling with a low door and white-washed walls inside. We sat down and awaited the young Indian woman's operation of putting on the moccason, which consisted of wrapping the legs (after the shoe or boot had been put on) with buckskin, until they were twice their natural size. They claim this is cooler than wearing less. After she was ready, we made a picture of her holding her baby in her arms, she standing in the doorway, making a very picturesque scene, with water jars and other Indian surroundings. We then had a large group to make in front of the same house, this time the grandfather wanted to hold baby, but finally thought he would look better on his broncho, which he mounted forthwith. By the time I had my camera set I had a wonderfully picturesque group in front of me, many of the Indians standing on the roof showing up dark and clear against the blue sky. This through with, every one of them must take a peep in the camera; this consumed much valuable time, but they one and all seemed so pleased that I could not resist until they had all looked in. After this I made a number of very successful exposures from the roof, etc., in all of them were figures of the Indians, in all attitudes, so that when we were done we were friends with all. They are a thrifty and industrious people, living in adobes or mud houses, which are kept *very* clean; they till the soil and herd sheep, having a reservation of six miles square, and about ten thousand head of sheep. Dogs are numerous, there being as many dogs as inhabitants, which number about twelve hundred. The old church of St. Augustine is supposed to be the oldest in New Mexico, being three hundred years old, having paintings on the walls near the altar brought over by the Spanish missionaries during the fifteenth century

The old padre, C. Peyson, is a very pleasant old man, appointed by the Bishop at Santa Fe. In nearly every house can be seen pictures in tin frames, all of them of Spanish making, dating far back into the sixteenth century. We tried to secure some of them, but no money could buy them. Although they profess Catholicism, they still cling to their old superstitions of the Montezumas coming etc.; they have a curious old pipe which is said to have belonged to Montezuma. It is very sacredly preserved. Near the church is the "Estufa," or council chamber, entered from the roof; here all secret meetings and councils are held. We entered this and found a circular room of adobe, thirty feet in diameter, in the centre is a chair-shaped fireplace backed by a wall of adobe, about four feet high, and running up in seven steps to a point. We perhaps were the first whites that ever entered this "Estufa."

The Pueblo is presided over by Governor Bautista Lucus, at present, a new one being elected every year. The chief holds his position for life, and the present chief is Domingo Juipe. The Pueblos marry young, the men at nineteen and twenty, the girls at sixteen and seventeen. There are two hundred and twenty-five houses in the Pueblo, all built of adobe, which they mix with the feet, generally, although I saw women mixing with the hands. The dogs run loose and are of all sizes and almost every color. But pigs are kept tied or chained in every case, never being free. The Pueblos also own quite a number of horses, cows, and burras; they raise a great variety of fruit, also much wheat and corn; the latter they grind in roughly constructed wooden troughs between two stones, their bread being very good and their fruit delicious; they are hospitable and affectionate, and evidently a fun-loving people, quiet and apparently inoffensive. One relic I got among them, consisting of a raw-hide box, worked all over with strips of raw-hide and different colored velvets, etc., is quite curious, and I have had it shipped to Philadelphia. Trusting soon to show you the results of my work among this interesting and ancient people, I am truly yours,

William H. Rau.

Osleta, New Mexico, October 11th, 1881.

New Year's Presents for your Help.—Wilson's *Photographics*, *The Philadelphia Photographer* for a year or half year, or *Photographic Mosaics*. Try it once.

BLACK SPECKS ON ALBUMEN PAPER.*

BY D. FILSON.

We were much troubled lately with black specks on albumen paper after floating and fuming, the cause of which baffled detection for a time. We used what is known as the agate or iron dish, and, on close examination, we discovered that the edge was much oxidized, and hence the perplexing trouble. We substituted for the "agate" a porcelain dish, and the *black specks came no more.*

Formula for Albumenizing Plates.

In most of the formulas which we have noticed ammonia is used for coagulating the albumen, which in some processes is deleterious. We have for a number of years used for that purpose concentrated sulphuric ether, which can have no bad effects.

Take the white of one egg, put it in a pint bottle, shake it until it thickens, which it will do in a few minutes; then add one ounce of concentrated sulphuric ether, shake well until it assumes the appearance of a smooth emulsion, and fill the bottle with water; filter several times through fine sponge, and it is ready for use. In warm weather it must be kept in a cool place.

SOCIETY GOSSIP.

Photographic Society of Philadelphia.—A stated meeting was held on Wednesday evening, October 5th, 1881, the President in the chair.

The minutes of the last meeting were read and approved.

The Secretary, on behalf of the Committee on Exhibition at the American Institute Fair, New York, reported that the exhibit was now in place, and that he had superintended the hanging; also, made arrangements with the authorities in New York relative to the repacking and forwarding of the exhibit to Philadelphia in November next.

Nominations for officers and new members being now in order, the names of the gentlemen who had served as officers of the Society for the past year were unanimously proposed for the ensuing.

Mr. Corlies exhibited a number of highly successful prints from gelatin negatives.

On behalf of Mr. J. C. Browne, Mr. Carbutt exhibited a remarkable series of instantaneous river-views and pictures of animals in the Zoological Garden, Philadelphia, Pa., all made on Carbutt's extra-rapid gelatin plates. The exposures had in all cases been made with a drop-shutter, and the development was the ordinary alkaline pyro, containing, perhaps, a larger quantity of pyro than usual, together with enough bromide to keep the shadows clear and slow the development somewhat, so as to force the intensity as much as possible. The subjects were, many of them, very difficult; such as elephants bathing, and wild beasts of dark color in their cages inside of buildings, etc. It was believed that such results could not under any circumstances have been obtained with ordinary wet collodion.

In the course of conversation upon the gelatin process, the members were well agreed upon the value of the ferrous-oxalate developer for landscapes, or, indeed, any exposure where it was sure that time enough had been given to the plate; it was not so liable to stain the shadows.

Mr. Stuart, of England, was introduced to the members by Mr. John Sartain, and gave an interesting account of the working of the gelatin process in England, and the differences in paper-printing. He said that artificial light was much used in the portrait-galleries (exposure about three seconds). He also said that the strength of the printing-bath was usually fifty grains, and fuming rarely or never used.

Mr. Sartain spoke of a composition similar to that used in Bengal lights, consisting of "meal powder" nitre and red orpiment, as giving a very brilliant and actinic illumination.

Conversation then followed upon the best methods of preparing an india-rubber substratum for negative transfer. The Secretary spoke of the impossibility of using a solution of rubber in benzole, from the fact that it could not be made to coat the plate evenly, but ran off in streaks and greasy lines. He said that Mr. Jacobi, operator for Mr. Gutekunst, had given him some made with equal parts of benzole and "Rhigolene," a peculiar hydro-carbon employed in minor surgery for producing local anæsthesia. This solution worked perfectly, and possessed a very slight opalescence, which, Mr. Jacobi said, was one of the tests of a good solution. Virgin gum masticated was the proper form of india-rubber to use, and it should be covered with chloroform for some hours before adding the other solvents. Strength, about a grain or two to the ounce. The plates, after being coated, should be used within forty-eight hours.

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* Written for *Mosaics,* but received too late.

On motion, adjourned.

Ellerslie Wallace, Jr.,
Secretary, *pro tempore.*

Association of Operative Photographers of New York.—October 5th, 1881, President Coonley in the chair. A new member was elected. A member sick and in distress was assisted by a loan of $10.00. After the regular business of the meeting, Mr. Kane gave some practical instructions on printing.

After reviewing the different kinds of paper, he spoke in detail of the modes of sizing and albumenizing. There is used for sizing starch, starch mixed with rosin saponified with alkali or gelatin; starch-sized paper reacts alkaline, gelatinized acid. Rive and Saxe paper are both starched. The size, even when paper is albumenized, will affect the tones; gelatin-sized paper is apt to produce red to chocolate tones, while those on starched paper are positive black. To produce a perfect action in sensitizing paper, three parts of nitrate of silver are needed to one part of chloride. Certain conditions will modify these proportions, for instance, the appropriation of a portion of nitrate of silver by the size and albumen, or the amount of chloride remaining undecomposed, or the manner of applying the silver. If paper is floated, the silver solution should be six times the strength of the salting, and it must remain on the silver twice as long as on the salt. To the silver brushed on the paper, it should be twelve times as strong, but when the paper is immersed in the salting, and sensitized by brushing, it is necessary to use thirty parts of silver to one part of chloride. An excess of salt will produce dull and cold tones.

A print is formed on chloride or on an organic salt of silver. Is the silver solution too weak, the paper will blacken but not bronze, and will pale in the hypo alkaline silver, or when containing free oxide will prevent the coagulation of the albumen. Acid solution will cause spontaneous discoloration in the dark-room. Ammonia nitrate of silver gives the print a black velvety tone, but not coagulating the albumen completely; the print is dull.

The most important of the organic bodies used in printing is albumen. It produces a smooth layer upon which all the details of a negative may be rendered. It has an alkaline reaction, due to a small quantity of soda, hence, when chloride of ammonium is used, ammoniacal gas is set free, which acts injuriously upon the coating of the paper To overcome this, manufacturers of albumen paper expose the albumen in an open vessel to the air, until a considerable amount of evaporation has taken place. Thus the albumen becomes more limpid, acquires an offensive odor, and reacts acid.

The discoloration of sensitive paper in the dark is due to the slow reducing action of organic matter, but more so to the state of the silver-bath. Alkalies in the sizing of the paper or in the sensitizing bath, moisture, etc., facilitate discoloration, while free acids or acid salts retard it.

Mr. Atwood.—The salting and silvering of the paper should be in the proportion of one to six. Mr. Kane floats his paper twice as long on the silver as it has been floated on the salted albumen. His proportion of the albumen mixture are the white of one egg, one-half ounce of water, two minims glacial acetic acid, and six grains chloride of ammonium.

Another meeting was held October 19th, 1881, President Coonley in the chair. The trustees were requested to deposit all the money in the hands of the treasurer, in surplus of $25.00, in a saving-bank. By motion of Mr. Shaidner, it was resolved to revive the literary committee. Said committee shall consist of three members, and it shall be their duty to bring to the knowledge of the Association any new processes or improvements, or other scientific matters of interest, and to propound questions for discussion. The committee appointed are O. Büchler, S. Atwood, and Wm. McLaughlin.

Mr. McGeorge read from a foreign publication the following facts:

Mr. Stebbing has discovered a substitute for glass for photographic purposes. It consists principally of gelatin, and forms a perfect support for emulsion or collodion coatings.

Dr. Phipson claims the discovery of a new metal, which for its properties he calls actinium. It is found accompanying zinc and cadmium in form of oxide, from which a sulphuret is made, which possesses strong and decided actinic properties.

Mr. Shaidner found difficulties in rectifying an old silver-bath. The bath was evaporated to dryness, dissolved, clarified with permanganate of potash, iodized, acidulated, etc., all in the usual and approved manner, but it would not work. A collodionized plate, as well as the sides of the bath dish, were completely covered with a crystalline deposit.

Mr. Coonley thinks the bath was heated so much that nitrate was reduced to nitrite. O. Büchler and Charles Ehrman ascribe the trouble to an injudicious use of permanganate of potash.

On Printing.—Mr. Ehrman thinks that generally the silver solution employed is too strong, certainly much stronger than need be to combine the chlorine of the chloride of ammonium with the silver of the nitrate of silver. According to Ackland's tables, 315 NH_4A is necessary to convert one grain of AgN into $AgCl$. He asks now why is more silver employed? Mr. Kane thinks that the surplus of silver is necessary to coagulate the albumen, and to assist in obtaining the tone desired.

To prevent blisters he says: Never make the toning-bath too alkaline; use one ounce of alcohol to 48 ounces of hypo bath, and wash after toning in a strong salt solution.

Mr. Bender prevents blisters by mixing a new hypo bath partly with an old one, but is inclined to think the fault is principally in the paper.

Boston Photographic Association.—The last monthly meeting took place at the studio of Mr. T. R. Burnham, 581 Washington Street, the attendance being the largest in the society's existence. The President, Mr. E. J. Foss, of Malden, introduced Mr. Harry W. French, who favored the company present with a brief discourse on the "Temples of India," accompanied by a fine display of stereopticon views. A number of superb art subjects (sculpture and architecture) were then projected on to the screen, followed by six admirable composition pictures, made with the "dry process," by Mr. D. T. Burrill, of Brockton, who was highly complimented for his great taste and inventive powers. The liveliest interest, however, centred in two large photographs made by Mr. Burnham, on 14 x 17 plates, with a view of obtaining the most thorough possible test of the relative working powers of the best portrait-objectives. One of these pictures was divided in four sections, each representing one view of the same object—a person—produced simultaneously on one plate (14 x 17), with four large portrait lenses of different makers. The other photograph was like the first, with the exception that the four sections were made separately, and in rapid succession, so as to maintain conditions favorable alike to each instrument. This highly interesting experiment, which originated with Mr. Burnham, is of unusual importance to the photographic profession, as it successfully, and with absolute fairness, determines the difference existing in portrait lenses of rival manufacturers, and the resulting pictures being proofs that will definitely settle any dispute that may arise in relation to this matter. Mr. Alvan G. Clark, of telescope fame, made some interesting remarks on lenses, which were followed by a bountiful collation, served on "plates" of papier-maché—a very acceptable kind of dry-plates. The rest of the evening was agreeably passed in listening to music, inspecting pictures, and scientific discussions. Among the finest photographs on exhibition were two 14 x 17 panel portraits of Miss Sadie Bigelow, made by Messrs. Ritz & Hastings of this city, which showed much artistic feeling in posing and illumination. Mr. Burnham deserves the thanks of the profession for his enterprise and ingenuity in bringing together so many eminent photographers and artists, and in entertaining them so handsomely—the expense being borne entirely by himself.

Chicago Photographic Association.—Regular meeting at Douglass, Thompson & Co.'s, 229 & 231 State Street, on Wednesday evening, November 2d, 1881. Vice-President Beebe in the chair. Called to order at 8 o'clock. Reading of minutes of last meeting dispensed with.

Mr. Greene gave notice that at the next regular meeting he will move to strike out Section 4 of Article III of the Constitution, which reads as follows: "No member shall hold the same office for two successive terms; but a member elected to fill a vacancy shall not be disqualified for election to the same office at the next regular election, unless he has held the office more than six months."

Mr. Greene explained his notice by remarking that it was sometimes a difficult matter to get a good secretary; it was not every member who was qualified for that office, and of those who were, very few were willing to undertake the work, or had time to spare for it. Therefore, he thought the Association should have the power of retaining a secretary in office as long as he was willing to serve, and as long as his performance of the duties of that office were satisfactory to the members, or a majority of them. They had experienced some difficulty in this matter in the past, and he could recollect one occasion when they had been obliged to override the Constitution, and re-elect their secretary for a second term.

Mr. Greene also read an extract from a letter received a short time ago from Mr. Carbutt, as follows: "I send you a few prints from a new emulsion I have been at work at for some time, and commence to issue the plates next week. They will have a blue label, and the factory mark, J. C. B., in compliment to John C. Browne, Esq., who has used a good many for instantaneous work, and enabled me to study their working in a way I had not time to do myself. In quality of image and rapidity, they are ahead of any plate I have made, or seen made in this country. For interiors they will prove very valuable. I estimate them at sixteen to twenty times the rapidity of wet. The prints sent were taken in the one-fiftieth of a second."

The prints referred to were passed around for inspection, and the general impression seemed to be that, for the degree of rapidity given in the letter, they were good. Some little discussion arose on the question of time; some members feeling skeptical on the subject, and wanting to know how the exposure was measured, it being well known that the fractions of a second are usually spoken of in a very loose way, and a one-fiftieth is a very short interval of time. The pictures were mostly animal subjects, and showed no evidence of movement on the one hand or under-exposure on the other, but it seemed to the Secretary that they were decidedly flat—no "get" in them. But this seems an almost universal fault of extremely rapid plates.

Mr. Gentile also exhibited some prints from portrait negatives (cabinets) made on his own plates, and they certainly left little, if anything, to be desired as specimens of fine work. A large number of prints of all classes of subjects and all sizes, from negatives (principally by Messrs. Beebe and Greene) on "Beebe" plates, were lying on the table; these and Mr. Gentile's pictures were calculated to convince the most skeptical that gelatin can hold its own against wet collodion for first-class work.

Mr. Douglass next read a letter he received a short time ago from Mr. J. H. Scotford, of Lansing, Mich., upon the subject of low prices.*

In concluding his reading of the above-mentioned letter, Mr. Douglass stated that he had replied to Mr. Scotford to the effect that he feared his ideas were a little too Utopian for this age and generation.

Mr. Hesler.—About 1863 or 1864 we got up an agitation on the subject of prices. Everything was booming. Gold was at a big premium, and prices of almost everything but photographs had advanced enormously. Well, we did finally succeed in getting two scales of prices adopted, and for quite a while the agreement was substantially lived up to, but after the end of the war the thing gradually fell through, as times got slacker and the supply of operators somewhat in excess of the demand. I think it would only be a waste of time to attempt anything of the kind now.

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* Owing to a press of "Society Gossip" this month we are obliged to defer the publication of this until next month.—Ed.

Several others ventilated their opinion on the subject; none appeared to think Mr. Scotford's scheme feasible, but it seemed the general opinion that it could do no harm to agitate the matter in the journals, and that Mr. Scotford's letter should be published. It might accomplish some good.

Mr. Douglass.—I had promised to have a paper ready for this meeting, entitled, "Some lessons of the late Convention," but have not had time to complete it, and do not know when I will be able to do so, therefore, perhaps, I may as well give you what is already written.

Mr. President and Members of the Chicago Photographic Association.—Gentlemen: It seems proper that some one should review the year of life of the Photographers' Association of America which began with the closing of its first convention in our city and ended with the convention in New York. Not for the purpose of fault-finding or criticism, but to measure it by a certain standard and see wherein it has failed of its purpose, and what lessons may be drawn from it for future guidance. The Association belongs to the photographers of America, and was instituted and carried forward by earnest, willing hands for their sole benefit, and that of the art-science they have adopted for their life work. That the fraternity is appreciative and mindful of its purpose is shown in the large and increasing membership. As its secretary for the second year of its existence, and giving much time and labor to its affairs, I am able to speak with some knowledge of the feeling existing as to the desirability of perpetuating such an organization. It is, I think, the wish of all progressive photographers that such a society should live, and a deep-rooted feeling of sympathy prevails towards associated effort for educational work. The twelve months that preceded the second Convention of the Photographers' Association of America, brought large additions to the membership, and with few exceptions, manufacturers and dealers serving photographers with the requisites of their profession, contributed liberally to its treasury. Of course, many passed it by as of little worth, and saw in the movement nothing that would bring a dollar to their purse, or in the least degree contribute towards their advancement. Although many that rank high in our art-science were conspicuous by their absence, yet enough of the representative men were there, giving active countenance and support to show that this feeling of apathy was not general among the "great lights."

I frankly admit that, although the Convention fell far short of the expectations of those who had been appointed to the charge of its affairs, yet, *per se*, it was a success. Our purpose at this time will be to draw, from the past year's labors and the resulting Convention, such lessons as shall serve a purpose for future good. The first observation is, that the place of meeting from year to year should be most carefully considered. It is an unfortunate fact that the legislation essential, and of vital importance, to the growth of the Association is most hastily accomplished, and without careful, deliberate thought guiding the votes of those who feel enough interest to be present when these matters of location and choosing of officers come up. Experience, both costly to the treasury and in membership, has clearly shown the folly of choosing large cities for our conventions. The Executive Committee of last year had the difficult task of locating, in the largest city of America, a proper place for the appointed Convention. With a very small membership and a treasury that existed in little more than name, they came to their labors hardly knowing what was best to do. They were kindly assisted out of their dilemma by the thoughtful kindness of a gentleman interested in our art-science, and who desired to encourage the educational work that the Association was expected to perform. The free-will offering of a place of meeting that had attached to it an apparently trifling expense, encouraged the Executive Committee, and they looked about them for the proper person to undertake the arduous duties of Local Secretary. A gentleman was appointed who had, it was felt, in the highest degree the qualifications necessary for the office, and, the arrangement made, the Committee turned to other work, looking towards the upbuilding of the Association and the accomplishment of a successful Convention. It will not be my duty at this time to criticise the work of any who labored for the welfare of the meeting; those who were there may judge for themselves. All I desire to do at this time is to analyze the work and draw from it lessons for our guidance. For future meetings it were well that at the hour appointed for the call to order, everything should be ready, and the annoyances of preparation not apparent to mar the occasion. A persistent appeal had been made to those who, it was felt, could do something towards the work of education, to lend their aid. This appeal was only partially successful. The Association depends for its value largely upon the generous attachment and support of those who are known in the profession as its representative men, and I am sorry to say that few who bear this proud distinction and honor came to our aid. In America alone, in our profession, those who should be foremost in promoting the cause that engages the attention of this Association, are the least moved in its interest. Look abroad to other countries, and around us in our own land, to other professions and industries, and you see the best talent engaged in united work for the advancement of their several vocations. It is an unpleasant feature which we trust will speedily disappear, for we need all the strength possible in pushing forward the great work in which we are engaged. There is no reasonable excuse that I can see why any should stand aside and allow more willing hands to labor in the vineyard of progress. There are none so exalted but what they can find good in association with their fellow craftsmen and feel a just recompense for the small amount of tax on their time and abilities. The art-science of photography has outgrown the epoch of secrets of formula and methods of manipulation, and now all stand with the same knowledge at their command, to be used with degrees of skill as they may find themselves capable, and the same elements of study and perseverance that bring the reward of success in other pursuits wait on the votary of Helios.

A vote of thanks having been tendered to Mr. Douglass for his paper, Mr. Edgeworth said, that the remarks made by that gentleman reminded him of a matter he wished brought before the Association. At his request, the Secretary read the letter, in the last number of the *Photographic Times*, signed, "Let Him Alone."

NEW YORK HOSPITALITY.

Editor Photographic Times.

DEAR SIR: A writer in the last *Times* goes off at a great rate in the first of his contribution on the above, but branches off to what the Local Secretary didn't do, Convention, ditto. Now, everybody in Chicago belongs to the Association, *ergo* Association belongs to Chicago. Scarcely a *photo* of New York is a member of the Photographers' Association of America. Now why should they spread their wealth and exhibit this work among a lot of strangers and stuff them with clams and beer. I guess some have pitted pretty well, for I heard of some that borrowed the equivalent of the expense home. Second, Seavey don't own New York, therefore he could not afford—and perhaps he knew what he was doing by not asking others. Again, from letters known to have been written, the past officers might have instructed the assistant what measures to take and course to pursue, and you can bet the whole matter will burst out yet. Executive Committee or no Executive Committee, then some *took* the chance to examine *our* work, for I know that a crowd of Conventionalists took possession of a gallery when the porter was about closing, and hauled over the grounds and accessories, peered and peeked in corners and through windows to find the "secrets" so often thought to be had in good galleries; took prints out of tanks and trays where they were washing (something the proprietor of the establishment never does himself, always asking his employés to show him this or that print), holding them up to light, etc. Maybe more would have been done, if better manners and good breeding were shown.

Seavey still lives, for all he is the under dog in the fight. Yours, etc.,

LET HIM ALONE.

Mr. Edgeworth supposed the writer (who, at any rate, was ashamed to sign his own name,) must be in the pay of Mr. Seavey, and took this underhand way of "blackguarding" men whom he dare not meet openly. Did not know whether the Society ought to take any notice of it or not.

Some member here suggested that we vote the writer a gentleman, but the Chair objected, that we do not wish to place ourselves on record as the Champion Lying Association of America.

MR. DOUGLASS.—I do not think it is worth while for this Association to take any notice of it whatever.

However, as a member suggests that possibly I can throw some light on the unfortunate status of affairs which somewhat marred the harmony of the Convention in New York, it may be well for me at this time to put on record the facts as I know them. I regret exceedingly the harsh words of criticism used in an article published in the *Times* over the name of one of our members, and which called forth another unfortunate outburst from a concealed friend of the gentleman, who had been touched by the unwise article of our thoughtless member. This Society, feeling that it was hurt a little by the words of these writers, has thought best to consider them; but to its credit, without a moment's hesitancy, pass them by to be forgotten. The explanation called for, and which I shall make, is not in the way of criticism or to invite unpleasant attention to any of the late officers, but to clear up one point that seems to be misunderstood. Early in my labors as Secretary of the Photographers' Association of America, I wrote to the Photographic Section of the American Institute and to the Operators' Association of New York, inviting them to appoint committees, and tender their services to the Local Secretary. I did this for the following reasons: I felt that the Association needed the support and countenance of every one of our fraternity that could be led to interest themselves in it. I also thought that the laborious duties of the Local Secretary might be, in a measure, lightened by skilful assistance. I knew that it would be a pleasant feature of the Convention to have the local societies represented by committees of reception, entertainment, and in other ways that I thought would suggest themselves to the officer in charge and the appointed committees. To their praise my invitations were promptly acted on by both Societies, and they took hold of the matter in a more earnest manner than I had hoped. The committees had a joint meeting, and enlarged its borders by adding some of the representative professionals in the city and the principal dealers. When I found what had been done, I was highly gratified, and saw in this concert of action splendid results.

It remains to be said, simply, that the power who could have used all this valuable and necessary material, after intimation that it was acceptable, flatly rejected it, and, as they have claimed, in a most offensive manner. Much relating to this episode in the affairs of the late Convention is already on record in the journals. I have only told you why these parties placed themselves in the position to meet the reception they did, and personally to express the deepest regrets that they were not more courteously received, and the objects I held out to induce them to aid us not consummated. The journals teem with criticisms on the conducting of the affairs of the Association, and the bold assertion is frequently made that the Convention was an utter failure.

For me, who labored faithfully for a successful meeting, it is unpleasant reading, but I cannot see it as a total failure, neither am I ready to say that we cannot have another Convention; but, on the contrary, I feel that next year, at Indianapolis, we shall have a good meeting, and one that is most profitable to the fraternity.

I do not intend to relax my interest in the Association, but shall do what I can to further its every interest; and if my life is spared shall be on hand next August with something to assist in making the Association what it can and should be, a necessity to the photographers of America.

Mr. Edgeworth thought that the editor of the *Times* was guilty of a gross oversight, to say the least, in publishing such an article over an assumed signature, and was astonished that a gentleman of such long experience in journalism should commit such a blunder.

Mr. Beebe would like to get the sense of the meeting as to whether it would be in order for us to take any action at this time with reference to the next Convention of the Photographers' Association of America.

Mr. Douglass thought we might pass a resolution that this Association is in hearty sympathy with the objects of the Photographers' Association of America, and will do all in its power towards making the next Convention a success.

This motion having been made and seconded, was carried *nem. con.*

Mr. Greene.—If there is nothing further before the meeting, I would like to make a few remarks on the subject of defects in dry-plates, and to commence with, let me remark that, never having made dry-plates, all I know about them is from using. First, as to spots. This defect, I think, was sufficiently ventilated at last meeting. Here is a plate illustrating another defect—evidently coated on wrong side of glass. Now, any one who has made the old ambrotypes knows that the glass for that process must be scrupulously clean, much cleaner than is necessary in making negatives by wet collodion. Now, it seems to me that just the same neatness and cleanliness are needed in making gelatin plates as in ambrotype work; while, in point of fact, much of the work is usually intrusted to boys, and it is very difficult to get boys to take the necessary care.

A young man once came to me to learn photography. When he left, after four or five weeks' practice, he could not clean glass sufficiently well for ambrotype work. This will serve to illustrate the difficulty of getting novices, especially boys, to perform this very necessary part of dry-plate making in a satisfactory manner.

Another common defect is flatness, a want of contrast. Here is a plate, best of a dozen; it has been forced with mercury, yet, as you see, it is so thin nothing can be done with it. What may be the cause of this extremely annoying fault I do not know, but presume a little careful experiment on the part of the manufacturers would enable them to avoid it.

Here is a print from a plate showing another shortcoming; it is coated thin on one edge. The only way I succeeded in getting a passable print from it was to stand over it with a piece of card-board, and keep it moving backwards and forwards the whole time of printing. Rather an expensive operation, if many prints were required.

A member wanted to know what make of plates Mr. Greene used.

Mr. Greene.—I have used nearly every brand of plates in the market, and do not intend my remarks to apply to any one in particular; I have not found any of them free from defects, and all of them possess good qualities, peculiar to themselves. For that reason I have abstained from mentioning any names in this connection.

Since last meeting I have used a good many plates of a new make, made here in Chicago, by the Chicago Dry-Plate Company, and known as the "Beebe plate," and I have found these plates at least as good as any in the market; but you don't want to use pyro with them. My experience being that if you do, they will not fix clear. With oxalate they work clear and fix very readily. I have been, as most of you know, a great pyro man, and I mention this because, while I do not believe in blindly following any man's formula, be he manufacturer or what not, yet I see, as in this case, that it won't do to use one cast-iron rule for the development of all makes of plates, and it may be well enough to follow the maker's instructions until you are satisfied some other treatment gives better results.

The Chair.—As a manufacturer of dry-plates, I find that a great deal of trouble arises from users disregarding the maker's instructions. And, to digress a little from the immediate topic, I would like, while I think of it, to call the attention of the members to a little hint I picked up from some one or other of the journals, do not recollect which, and which may have escaped the attention, or not have been deemed worth trying, by some of you. It is using the front lens of your portrait combination for large heads, especially children. Take out back lens and turn tube end for end, or screw front lens in place of back, whichever is most convenient. I was surprised at the result, and have discarded everything else for this description of work, using front lens of 4 x 4 tube. Any one who will try this experiment will find himself possessed of a new power, without any expenditure. I find the work so done entirely as satisfactory to my patrons as to myself. Another wrinkle you will find useful, is to use a dipping bath for your oxalate developer, keeping a little oil on top to prevent oxidation. When your plate is in it, you can open your dark-room door without risk, as the deep red color of the oxalate solution is an ample protection. Furthermore, don't be afraid to use plenty of light in your dark-room; only be sure it is the right color, and you may have an ample volume of it. No need for working in the dark.

Mr. Gentile.—Using a single combination lens for portraits is nothing new. At one time it was the only instrument available.

Mr. Beebe.—Certainly; the gentleman is right, nothing new in using a single lens in this way; but I think it is somewhat a modern idea to make a child's head nearly life size in eight seconds with such an instrument.

Mr. Greene advised every photographer to accustom himself to both pyro and oxalate development, because some plates will work better with one, some with the other. Oxalate is undoubtedly the simplest, but he hardly thought it admitted of the same latitude in exposure or intensity.

Mr. Edgeworth.—When I commenced using dry-plates, pyro was my developer; after awhile I changed to oxalate, and now I have partially returned to pyro, which I prefer for interiors, giving oxalate the preference usually for out-door work. I have tried the Beebe plates; find they work finely, very finely, but some of them show a defect in packing, which I think could easily be remedied. Here is a specimen. You see this insensitive margin, caused by the paper mat placed between plates in packing; you will also observe that it runs in an irregular manner into the body of the plate.

Mr. Beebe.—Pressure does it, renders the plate less sensitive. The only way to keep the bulk of the plate uninjured thereby, is to use a mat in the way referred to.

Mr. Edgeworth.—I think the Chair misunderstands me. It is not the narrow, insensitive margin I object to, but the way the effect in question spreads into the plate. Now, I believe this results from chemical matter in the paper used as mat being acted on by the moisture contained in the gelatin or in the atmosphere. Now, if you used some hard, water-proof sample of paper, I think the trouble would be materially reduced, if not entirely obviated.

The Chair.—Plate makers ought to be much obliged to Mr. Edgeworth for his suggestion. Speaking as one myself, I certainly am, and shall proceed to act upon it. It is by users of plates giving us the benefit of their experience, observation, and thought, in this way, that manufacturers will be enabled to get rid of many difficulties.

A motion to adjourn having been put and carried, Mr. Beebe distributed trial packages of his plates to such as wished to test them, and a little informal chat took place before the members dispersed.

F. H. Davies, *Secretary*,
78 Michigan Avenue.

German Photographic Society of New York.—After several preliminary discussions among different members of the old German Photographic Society of New York, all the former members were invited to attend a meeting to be held on the 15th day of September, at 8 o'clock P. M.

At the date and time mentioned, a good number of the old stock, and about a dozen of new-comers, desirous to unite in the good cause of advancing the interest of the fraternity, assembled at their former place of meeting, Nos. 66 and 68 East Fourth Street. After the wish had been expressed by every one to revive the old society, and to constitute it on a more practical basis in order to insure its old usefulness, which years ago had been willingly acknowledged, all present pledged themselves to do their best in aiding the ends and purposes of the society.

The meeting having been called to order by the senior member present, Mr. Charles Kutscher, it was decided to elect officers for the remainder of the term, which is until the 4th day of March, 1882, when the annual election of officers will be in order. The following names were returned as unanimously elected :

President—Mr. Charles Kutscher.
Vice-President—H. W. Vaupel.
Treasurer—L. Nagel.
Financial Secretary—Charles Weller.
Recording Secretary—M. Gmelch.

After it had been proposed and accepted to hold meetings on the second and fourth Thursday of each month, the meeting was adjourned to the 22d of September.

September 22d the members met at the regular hour, President Kutscher in the chair. After the election of the undersigned as Corresponding Secretary, the motion to communicate with different photographic journals, in the first place the *Philadelphia Photographer*, was carried, also a committee appointed to revise the Constitution and By-Laws of the Society, and to report the results of their labor at the second meeting in October, the committee to consist of Messrs. Holler, Vaupel, and Baumgaertner.

Prints from gelatin dry-plates were then exhibited by Messrs. Nagel and Vaupel, the latter giving a detailed account of his mode of developing, the formulæ of which I will here give in short. Two stock solutions are prepared :

No. 1.—Pyrogallic Acid,	. .	1 ounce.
Glycerin,	. . . .	1 "
Alcohol,	. . . .	6 ounces.
No. 2.—Bromide of Potassium,	.	60 grains.
Glycerin,	. . . .	1 ounce.
Water,	. . . .	6 ounces.
Ammonia, No. 8,	. .	1 ounce.

After exposure the plate is well washed, then treated with alum. To develop, add to each ounce of water twenty drops each of the above solutions, or, to eight ounces of water, one and a half to two drachms each. Should the negative develop too quickly from over-exposure, add a few drops of solution 1, when the developing will be checked for a second, but will continue more gradually. Mr. Vaupel declares this developer to be the best he has worked yet, and finds the use of glycerin especially advantageous, as he did not experience a single case of frilling after he had commenced using it.

The thanks of the members were tendered to Mr. Vaupel for his communication, and a short discussion on topics of minor interest ensued, after which the meeting adjourned.

Ad. Esselborn,
Secretary, *pro tempore.*

Photographic Society of Philadelphia.—Minutes of the regular meeting held Wednesday, November 2d, 1881. The President, Mr. Joseph W. Bates, in the chair.

The minutes of last meeting were read and approved.

Mr. S. M. Fox, on behalf of the Room Committee, reported that the presentation prints were ready for distribution, and further, that during the past year sixty-two volumes had been added to the library.

The Treasurer, Mr. S. Fisher Corlies, presented his annual report, which was, on motion, accepted, and ordered to be entered on the minutes.

The election of officers for the coming year resulted as follows :

President.—Mr. Joseph W. Bates.
Vice-Presidents.—Mr. John Carbutt, Mr. George W. Hewitt.
Recording Secretary.—Mr. C. R. Pancoast.
Corresponding Secretary.—Dr. Carl Seiler.
Treasurer.—Mr. S. Fisher Corlies.

The Chair appointed the following :

Room Committee.—Messrs. G. W. Hewitt, S. Fisher Corlies, and S. M. Fox.

Committee on Revision of Minutes for Publication.—Messrs. John C. Browne, Samuel Castner, Jr., and C. R. Pancoast.

Mr. Browne showed some faded silver prints, which had been handed him by Mr. Rau, and invited discussion as to the best method of restoring the same.

Mr. Wallace suggested treatment with mercury bichloride, in much the same manner as negatives are strengthened, but was of the opinion that good results could scarcely be expected.

The subject of a public lantern exhibition was then taken up and discussed at some length.

On motion, the Chair appointed Messrs. Fox, Hewitt, and Wallace to take the subject in charge and report at a future meeting.

Mr. Fox exhibited a photograph of the celebrated whipping-post and pillory in the jail at Newcastle, Delaware.

The attention of the members was then invited to a copy of the *Photographic Amateur*, a neat little work, edited by Mr. J. Traill Taylor, which had been presented to the Society by Messrs. Wilson, Hood & Co.

Mr. Browne gave an interesting account of the American Institute Fair at New York, describing many of the principal exhibits. He also showed one of Messrs. Anthony's new, double dry-plate holders, which was quite ingenious, and thought by some to be superior to the Scovill's.

A recess was now taken, the members being entertained by an exhibition of lantern slides from the collection of Mr. Bates, the subjects being landscape and architectural views in Spain and Portugal.

At the conclusion of the lantern exhibition the presentation prints were distributed among the members, and elicited universal admiration.

On motion, adjourned.

C. R. Pancoast,
Secretary.

Special Meeting of the Baltimore Members of the P. A. of A., and the leading photographers of the city.

Pursuant to a call of the Vice-President of Maryland, Mr. N. H. Busey, the members of the Photographers' Association of America and a few others specially invited, comprising nearly all the leading photographers of the city, assembled on Monday, November 7th, at 5 P.M., at Mr. Busey's gallery. Mr. Busey called the meeting to order, and stated the object to be, to take into consideration the following advertisement taken from the Baltimore *Sun*, and to take such action thereon as might be deemed best to protect the craft in this city against the threatened degradation and loss that would ensue from the general adoption of such methods. The following is the advertisement:

An Innovation in the Art Photographic. An Entirely New Departure in Photography.—Eminent scientists of Europe, after years of study and experiment, have perfected a photographic process, known as "The Instantaneous," which yields the finest artistic and most life-like portraits yet produced by the art. Foreseeing the valuable nature of this great discovery, we have for the past two years, through our journal, *The Photographic Rays of Light*, besides issuing a work devoted to the subject exclusively, advocated its adoption by the profession. Having used the process for several months at our studio, and finding it so far superior to all previous modes of manipulation, we have made it a *specialty*. It affords us pleasure to be the *first* to introduce and call the attention of the citizens of Baltimore to this new photographic invention. Among its advantages to the public are the absolute certainty of securing perfectly natural expressions; no tedious waiting; weak or light eyes portrayed finely; nervous persons feel perfectly at ease; no chemical odors; children not considered a trouble; as good pictures made in cloudy as clear weather, etc.

Desiring to give the new method an introduction to the public, we have concluded to furnish (even though the cost of production greatly exceeds the ordinary method so long in use) our finely finished artistic imperial cabinet cards (*for a limited time only*) at three dollars PER DOZEN.

The public are cordially solicited to call and examine specimens made by "The Instantaneous" process at the Imperial Art Studio, 205 West Baltimore Street.

Richard Walzl,
Proprietor.

There was a general expression of indignation at this attempt to gain business by a ruinous cutting of prices, that could not be obtained with legitimate competition, by one of the most pretentious and expensively-fitted establishments in the city. The indignation was the greater, because the proprietor of said establishment had become rich by the patronage of the craft throughout the country. There were present Messrs. N. H. Busey, J. Holyland, Wm. F. Shorley, W. Getz, D. Bachrach, Jr., M. Bachrach, J. P. Blessing, D. J. Wilkes, George C. Mueller, H. Schaefer, Mr. Buffham, Mr. Shutte, Mr. Robinson, and John Betz, Jr., while a number of those not present sent word that they would support the action of the meeting. After an informal exchange of opinion, it was found to be the unanimous sense of all present that it would not be best to meet this action by a similar one, but to adhere to their present prices, which were already too low, and not follow in the suicidal policy of such a ruinous reduction ; more especially as the work turned out by that establishment did not commend itself to the better class of patrons. Mr. Holyland and some others proposed a series of resolutions, to call upon the fraternity of the country not to encourage a concern that tried to ruin the business of the craft in this city by such despicable means, and have them published under the signature of those present. Messrs. Bachrach and Busey called attention to the fact that the proprietor of that concern was fond of lawsuits, as had been demonstrated by recent occurrences (laughter), and it would be apt to make them all liable to a suit. Messrs. Bachrach and Quartley related the disastrous effect upon the business of Washington and Richmond a similar action by an unscrupulous and short-sighted photographer had precipitated, and warned those present against similarly ruining themselves. Mr. Blessing proposed a committee to wait upon Mr. Walzl to point out the ruinous folly of his course, and try to prevail upon him to cancel his action. Not agreed to. Finally, a motion was passed, authorizing the President to draw up resolutions to express the sense of the meeting as developed by the debate. Also a motion requesting Mr. D. Bachrach, Jr., to report the proceedings and resolutions, and have them published in the journals. (It was through the strenuous efforts of Mr. Bachrach that such a large number of members were secured last year for the Photographers' Association of America from this city, fourteen out of a total number of thirty-four proprietors of galleries, comprising nearly all the leading photographers among the number.)

Resolutions.

Resolved, That in the name of the Photographers of Baltimore who have the dignity and financial welfare of our profession at heart, we protest against the suicidal folly of such a reduction of prices as given in the advertisement which was the cause of this meeting, and which is the more reprehensible, coming as it does from such a pretentious establishment, and from one that has grown wealthy from the patronage of the craft.

Resolved, That we will not countenance or support by our patronage any establishment that attempts to ruin the business of the craft of an entire community by such means.

Resolved, That for the present we will adhere to our prices and will not reduce them, and that any future action of ours will be taken in concert, and which will depend on future developments in this connection.

The above resolutions were approved by all present, and also by nearly all of the craft in the city who were not in attendance.

The meeting was then adjourned subject to the call of the President.

Attest: N. H. Busey,
Vice-President P. A. of A. for Maryland.

GERMAN CORRESPONDENCE.

Actinium a New Metal—Woodbury's Improved Process—A Gelatin Plate as Collotype Plate—Increasing Sensitiveness of Gelatin Plates—Chloride of Silver Emulsion—New Lenses.

As it is a well-understood fact that during these last twenty years new elements were discovered almost exclusively through the spectral analysis, it seems remarkable that nobody had thought thus far that also the chemical effects of the light might aid in discovering a new element. Now, this has been done; in fact, Phipson discovers that zinc-white becomes rapidly black in the light, and he observed soon that this phenomenon is caused by the influence of a hitherto unknown body, which he named, expressive of its qualities, actinium; and he even succeeded in isolating the body. It is remarkable that only its sulphur combination, which, as Phipson says, amounts to about four per cent. in zinc-white, seems to be sensitive to light. If this body should really be present in such ample quantities, it might perhaps be made use of in a technical sense.

Of more importance to the photographer is no doubt the fact, that Woodbury's relief print has now been simplified so much that it can be practically employed in every studio. Until now the lichtdruck was vastly superior to the Woodbury process in regard to simplicity. The Woodbury process required a very strong hydraulic press, without which the gelatin relief could not be copied. Now, such a press is not needed any more. A piece of tin-foil is placed upon the dry gelatin relief and drawn through a roller-press. The tin-foil is pressed in the most minute lines of the relief, and can then be fixed by a sub-layer of rosin so as to serve as printing-plate. The printing proper is child's play in the Woodbury process. Gelatin black is poured upon the plate and a sheet of paper is placed upon the latter under gentle pressing. Mr. Woodbury introduced the latest modification of his invention by way of subscription in Belgium, offering to the subscriber the necessary apparatus and instruction in the process for the sum of five hundred francs. The modified process is called "Stannotype."

Perhaps it may not be necessary in future to make even a gelatin relief, for is not the developed gelatin-negative plate also a relief, even if only weak? but as Mr. Warnerke showed, with the same behavior as the carbon print, *i. e.* the property of being developed by hot water—an experiment, however, with which other common mortals do not succeed so well as the inventor. I wonder what else will be made yet with the gelatin plate? Pizzighelli changed the same even into a lichtdruck plate. He took a gelatin negative obtained from a line-drawing, saturated it in a solution of chromate of potash, lighted from the reverse, obtaining thus a layer, which received fatty ink and allowed printing. Of course, much care has to be observed, rendering the process seemingly somewhat difficult, but Pizzighelli actually published in the *Photographische Correspondenz* a plate thus printed.

On a former occasion I wrote you that my remarks about the increasing of the sensitiveness of the gelatin plates through nitrate of silver, gave rise to further experiments, having the result of increasing the sensitiveness of those plates very materially. The only drawback was that plates treated thus with nitrate, lost their sensitiveness already after the lapse of twenty-four hours, but now Eder and Pizzighelli find a method to prevent this rapid disintegration. It is understood that citric acid prevents the disintegration of silvered albumen-paper, and upon this fact Eder and Pizzighelli's process is based. They bathe common gelatin plates three to five minutes in a well-filtered mixture of 100 c.c. alcohol and ½ c.c. solution of citrate of silver. The citrate of silver solution is obtained by dissolving 10 grm. citric acid and 10 grm. nitrate of silver in 100 c.c. water. The plates are placed upon blotting-paper and kept in a place absolutely free from dust, and dried, which takes place in a few minutes. (Dust hurts the silvered plates much more than common plates—where a dust particle touches the plate, it causes in conjunction with the much easier disintegrated solution of silver the formation of black dots.) According to their experience thus far, such plates keep their sensitiveness about six days, but, no doubt, they remain unchanged much longer. One may also use more concentrated silver-bath, adding, for instance, 1½ c.c. silver solution to 100 c.c. alcohol, by which an even higher sensitiveness than with diluted solutions is obtained, but the plates work not so clean, especially around the edges and the draining-corner. These plates can stand any good developer which they could bear before; they keep very clear and give sufficient strength without any kind of intensifying. By adding ten to thirty drops of a solution of hyposulphite soda (1200) to a cupful of oxalate developer (about 100 c.c.), the sensitiveness may be raised and the softness increased, without incurring any danger from veil. It is very remarkable that silvered plates (especially with ample exposure) render more harmonious negatives than common plates and approach the character of the wet plate, showing more details in the brighest lights. Fuming the silvered plates with concentrated ammonia immediately before exposing is favorable. The plate is placed (layer downward) upon a cup in which are some drops of ammonia, when the plates become somewhat more sensitive and develop with more strength. The color of the silvered plates developed with iron oxalate is more brownish than that of the unsilvered ones; when stronger silver-baths are employed, it assumes a greenish olive color. The color of fumed, silvered gelatin plates is a shade darker, blacker than the color of not fumed silver plates. It is an interesting fact that the strong acid—citric acid—does not injure the plates, while in the common negative process the acid would reduce the sensitiveness considerably. How little injurious acid is to emulsions, can easily be seen in any emulsion which contains about forty per cent. acetic acid, and yet is as sensitive as the original gelatin emulsion before the treatment with acid.

The latest work of Eder and Pizzighelli, of which I made mention some time ago, has now been published under the title: "The photography, with chloride of silver, gelatin, and chemical development, with practical instruction for the rapid production of diapositives, stereoscopic slides, transparent pictures, duplicate negatives, enlargements, and copies upon paper." This little work by the above named authors, who have both done so much already for the photo-chemistry, contains in its first part an illustration of the experiments on the photo-chemistry of the chloride of silver; in its second practical part it describes the manufacture of the chloride of silver, gelatin plates, and their practical use. They make wonderful positive glass pictures. The firm Martin here manufactures already such plates wholesale, so that their introduction in a practical sense is assured. The plates are lighted with gas-light in the printing-frame, then developed with citrate of iron and potash, and then fixed and dried.

Besides this news from the chemical province, we have also received not a few novelties from the optical department—new lenses for portraiture, from Busch, in Rathenow; new euryscope from Voigtländer, in Braunschweig, but most attention is paid to Steinheil's antiplanate. I have written you before about this antiplanate in my letter appearing in your October number, to which I have to add yet that the antiplanates are divided into two systems, one "light-strong" for portraits, the other with less strength of light for landscapes and groups. The portrait antiplanate has a clearness like the common portrait objective; it consists of two pairs of lenses with very unequal focal distance; the first pair has a shorter focal distance than the whole objective, while the second pair, the lenses of which stand apart, has a negative focal distance. The group-antiplanate, of amply twice the clearness of the aplanate, consists also of two pairs of lenses, with quite unequal focal distance; the focal distance of the first pair of lenses being also shorter than that of the whole objective, while that of the second pair is negative, both pairs of lenses being cemented together, however. As you see, much has been done of late to further the cause of photography, better objectives, plates more sensitive, and electric light always handy, and only one wish remains—more customers and higher prices. Alas!

Very respectfully yours,
Dr. H. W. Vogel.

Berlin, November 1st, 1881.

Photographic Mosaics, 1882, Wilson's *Photographics*, the *Philadelphia Photographer* for 1882, all make useful presents for your help, and any gifts in that line will be returned to you tenfold in the extra work and intelligence which will be given in your behalf. Try it.

Wilson's Photographics coutains 352 pages; 7 x 8¾ inch cover, and is 1½ inches thick. More than 100 illustrations. It gives full details of all processes.

FRENCH CORRESPONDENCE.

Wilson's Photographics — American Artotypy and Photography—Edison's Success at the International Exhibition of Electricity — Photo-reliefs of Messrs. Otto Moses and A. Guimaraes—Other Exhibitors of Photographic Specialties in France —Photo-typographic Prints of Mr. Ives—Future of this Important Application—Electricity Certainly called to Largely Contribute to the Progress of Photography: Accumulators, Motors, Incandescent Lamps, Transmission to a Distance of the Motive Power and Light.

Before expressing an opinion on the remarkable work of Mr. Wilson—Wilson's *Photographics*, — we resolved to examine it well, so as to be able to speak of it, not lightly, as is too often the case in reviewing works of current value, but understandingly. This is the reason, owing to our absence, that we have deferred, longer than we would have wished, to say all that we think of this important publication. Mr. Edward L. Wilson is not only one of our most sympathetic colleagues, but he stands, also, foremost among those who honor photographic science by their talent and their prodigious activity. The proof of this is found in the number of his works, the value of his elegant periodical, the *Philadelphia Photographer*, and finally in his happy initiative in all matters pertaining to photography.

No doubt he will take us to task for this frank expression of our sympathy, and our admiration in a publication of which he is both editor and proprietor; there is one thing certain, we will not refrain from giving these testimonials in those publications in which our right of saying everything—even a good word for our friends—is incontestable, and we do not see why, in the limits assigned to us as co-laborer in the *Philadelphia Photographer*, we should not be authorized to express ourselves freely, when it is a question of a name dear to our readers and of a work that we wish to recommend to them.

Let it not be supposed that, on our part, this is one of those marks of friendship which worthy colleagues like to give each other; one of those trivial recommendations which are born and flow from the pen when holding in hand the work, however mediocre it may be, of a colleague or a friend. In such a case we prefer obeying the wisdom of nations: if speech is silver, silence is golden. We have laid it down as a principle to rarely attack works that are indifferently good or even bad, confining ourselves to saying nothing about them, and it may be taken as absolutely certain, that when we praise a work it is because we sincerely think it worthy of eulogy, and because we have conscientiously studied it, and very favorably judged it.

When an author such as Mr. Wilson is in question, it would be presumptuous on our part to take the position of a judge, we, who consider him rightly as a master, in whose presence we have but to bow our head. The only thing that we can be allowed is to establish a comparison between his recent treatise on photography and those of other eminent authors. From this examination it results that the plan of his work is entirely distinct from that of other writers. Whilst giving to his *Photographics* the character of a general treatise on photography, we see at once that Mr. Wilson has especially sought to give precise rules for the current practice of photography—that pertaining to negatives and their transformation into positive prints. The larger part of this important work turns on this indispensable starting-point for every beginner, and the auxiliary processes, the more or less industrial applications, only appear likewise as accessories; they form useful complements of a book which thus gives a very complete compendium of the divers processes. But as we said before, the author insists in a truly legitimate manner upon the installation and essential manipulations of the photographic art. The artistic point of view has not been forgotten, and he devotes to it a lengthy and interesting chapter of sixty pages, "*Treatment of the Subject*," full of useful suggestions, and carefully selected illustrative drawings. A beautiful phototype made by Mr. Gutekunst, whose talent has already many times attracted our attention, completes this chapter in the most felicitous manner. It contains no less than eleven portraits of Miss Adelaide Detchon. All the expressions of her beautiful face, all the poses of the body are different, but the whole is always artistic and gives a good idea of what can be done with his model by a photographer gifted with artistic feeling.

After the first chapter comes a series of necessary suggestions for all beginners: the nomenclature of the apparatus to be used—the lenses to be chosen—the dark-room—the preparation of the plates—the solutions and chemical substances—the manipulations and the causes of failure, as well as their remedy—retouching the negatives—the posing-room—the lighting and the accessories. Then comes the part pertaining to positive printing, treated with the same details as that of which we have given but a rapid analysis. Finally, the mounting and finishing of the prints terminate this ensemble overflowing with precise details, cuts of all kinds adding to the lucidity of the text, and notes in which are found citations and formulæ collated from the works of the principal writers of the whole photographic world.

The last and third part, so to speak, of this extensive work is devoted to outside photography—to printing on gelatino-bromide of silver, the Vogel emulsion, divers processes for enlargement, platinatypy, phototypy, and transferred collodion prints. The treatment of residues has not been forgotten, nor have tables for the conversion of weights and measures. One hundred and eighteen wood-cuts, if our count is correct, illustrate this splendid work, which has, besides, two plates not in the text—the one we have referred to above, and a fine phototypic portrait of Mr. Wilson, by Mr. Gutekunst. As will be seen, the work in question is truly a *whole*, and its three hundred and fifty-two pages, with few exceptions, point to a single object—the wholesome and complete education of the photographic apprentice and the growth of the more practised. Let who will take such a guide and follow it step by step until the end, and he will then be able to safely take up photographic practice; if he does not yet know all that is required to-day of wide-spread knowledge to be erudite in photographic science, he will at least be an excellent operator. This treatise is something more than a good book—it is a good action, not only because it is written with talent, but also because it is written with scientific loyalty, which commands respect for its author.

We were justified, as it has been seen, in devoting to this publication, which does honor to our science, so much space. We have but one regret, that of not being able to give some extracts from it. The selection would really be too embarrassing, and we therefore confine ourselves to referring our readers to the book itself. Many will read it with profit, and all with a lively interest.

And now, I must ask my friend, our editor, to pardon me for having put his great modesty to such a test. I had no intention of pleasing or displeasing him, but simply to give my impressions, for the good of all my colleagues, present and future.

We are indebted to our estimable colleague, Mr. Wilson, for a great number of artotypes, coming from the establishment of the Artotype Company, and from Messrs. Harroun & Bierstadt. These prints rival in finish those made on albumen. We must compliment the producers for their fine success in the direction, too little worked as yet, of industrial impressions and indelible prints. Some fine portraits, received from the same source, made by Messrs. Bates, Hodges, C. W. Motes, and Scholten, have confirmed the very high opinion that we entertained for American photography. Mr. Scholten's prints are very remarkable, having the peculiar feature of being printed from negatives on gelatino-bromide.

We cannot pass over in silence the immense success of the International Exhibition of Electricity now being held in Paris. One of the exhibitors who has most largely contributed, is your countryman, Edison, whose numerous inventions, known the world over, have excited the admiration of all the visitors to the exhibition. His marvellous lamp, especially, drew general attention, and although two other competitors, Messrs. Swan and Maxim, showed lamps somewhat similar, we are inclined to think, without entering into a discussion of priority, for which we are incompetent, that it is the Edison lamp that deserves to be placed in the first rank.

Photographically speaking, we were struck by the exhibition made by Messrs. Otto Moses and C. Guimaraes of photo-reliefs, in which the relief is bolder than anything that has yet been done in this line by the action of light. This is another invention that comes to us from America, and which does honor to the spirit of invention and to the science of our colleagues of the New World. We are yet ignorant of the process used to obtain these reliefs, but we hope shortly to be able to give the details; here electricity is only used to convert depressions into galvanoplastic reliefs.

Among the other articles exhibited, excepting Mr. Woodbury's camera for unaccompanied balloons, and our selenium electric photometer, we find nothing besides divers applications for electric lighting. Messrs. Liebert, of Paris, Van der Weyde, of London, Dupont, of Brussels, figure there either for the working of their system—this is Mr. Liebert's case, and his splendid *salon* for posing is one of the attractions of the exhibition—or for the results of their printing by electricity.

At present we cannot offer much that would prove interesting in the way of important photographic novelties. But renewed activity may be expected when the French Photographic Society has its meetings, and we hope that the photographic campaign for the new term of 1881–82 will prove rich in important improvements.

The beautiful photo-typographic prints obtained by Mr. Ives' process, and published in the *Philadelphia Photographer*, have been greatly admired; all my friends who have seen them say that nothing better has been done in this line, and we believe that in the future the greater number of illustrated publications will be able to utilize this process, instead of the often incomplete interpretation given by a wood-cut. To render more popular than we can by words the knowledge of this remarkable process, we have just published in the November number of the *Moniteur de la Photographie* the portrait, so faithfully reproduced, of our editor, Mr. Edward L. Wilson.

Before finishing this letter, already too long, we would like to revert to the electric question, which is now the order of the day. Our mind is full of the marvels seen at the Exhibition of the Palace of Industry, and it feels the desire of communicating to others the admiration and enthusiasm with which it overflows.

Photography, in our opinion, is destined to make numerous applications of this marvellous fluid—so powerful and so subtile—not only in using the intense actinic force of its light, which has been done for a long time, but also in utilizing the electro-motive power, whose action would cause notable modifications in photographic reactions.

We see in our dreams of a near future, photographic ateliers having all the comfort given by the use of electricity. Here, reservoirs for storing and concentrating a force as a motive power; there, baths having a galvanic decomposition; and everywhere, lamps to be used both for lighting and heating. It cannot be said that we shall not realize for ourselves this typical atelier in which electricity will reign supreme, combining in itself all the effects that we now obtain from the light of day, from those of gas, from steam, and all the divers mechanical means. We are advancing rapidly towards the realization of the hopes of our scientists, who have always thought that electricity would take the place of all other physical agents. We now have it in principle, and soon it will be everywhere in practice.

LEON VIDAL.

PARIS, Nov. 1st, 1881.

INCIDENTS OF THE CONVENTION—ACCIDENTALLY OFFENSIVE.

ON page 333 of our last issue, under the head of "Incidents of the Convention," first section thereof, is published what we looked upon as a good-natured bit of chaffing at the whole body of us of the Convention, and what we took for a good joke and enjoyed a hearty laugh over. Our good friends, Messrs. Dumble and Beebe, whose names happen to be mentioned, are not so pleased, however. Mr. Dumble writes us as follows:

DEAR SIR:

In reading the last journal, I am surprised and chagrined to find an article, copied from a Sunday paper, that is alike discourteous to myself and to every member who attended the Convention. Though intended to be humorous, it is really a scurrilous production, and filled as it is with misrepresentation and a covert blow at the finer sensibilities of every man who had wife or sister there, it should *never* have been reproduced in the pages of the journal, even for the "amusement or reflection of your soberer readers."

The lady who occupied the posing-chair was hired for the occasion, and not the slightest shadow of discourtesy was shown her, or would for one moment have been tolerated by the 600 photographers present.

I cannot think that any slight could have been intended by the insertion of the copied article, but believe it is calculated to create a wrong impression.

Yours truly,
A. DUMBLE.

ROCHESTER, Nov. 1st, 1881.

We sincerely regret having committed this offense. Mr. Dumble and Mr. Beebe need no assurance of our most kindly and friendly feeling for them. They are two of our most rapidly growing photographers, and we value them accordingly.

Newspaper correspondents will have *items*, no matter at whose expense, and we suppose the experiments of our friends, "under the skylight," *was* calculated to impress a greenhorn very much as he describes himself. We were not personally present on the occasions alluded to, and did not look upon the paragraph complained of, as chaffing any one any more than all.—ED.

QUESTIONS TO THE CRAFT.

THE best way to find out anything is to *ask*. "You will never learn anything unless you ask," said the employer of our boyhood to us once. Since then we have never been ashamed to ask, for ever since then we have been a devoted, anxious, asking learner.

Wishing therefore to learn from the craft how certain matters stand with them, we have prepared a series of questions (as below), which please consider as addressed personally to you, and kindly give us a generous response.

Our object is to assist, and encourage, and promote the growth of our art at large, and we hope to be favored by the many who are able to give us information.

CIRCULAR LETTER.

DEAR SIR:

I desire to publish in the *Philadelphia Photographer* such information as I can get from the craft on the following points, and would be greatly favored if you will give me such practical points as you can in answer to my questions. Treat the matter as fully as you please, and thus help me to help us all.

1. What has been your experience with emulsion plates? Are you having success with them, and what advantages do you find in their use?
2. What have been your failures with them, and what the causes thereof, and what the cure?
3. Do you think they will ever enable you to discard the bath and collodion?
4. Do they place you in the way of producing more artistic work?
5. How do your patrons like the resulting pictures?
6. Are your patrons more appreciative than formerly?
7. What are the prospects for business during 1882?
8. Any further hints for the good of our co-workers, will you kindly add them? and much oblige

Yours truly,
EDWARD L. WILSON.

PHILADELPHIA, Nov. 4th, 1881.

We shall publish the responses we get from time to time, beginning next month, and in the end sum up the whole matter.

SCOVILL MANUFACTURING CO., NEW YORK.

THE veteran soldier often becomes so accustomed to the smoke and smell of battle as to scarcely notice what is going on about him, and even fails to be on the alert in many things which should have his best care. Lest we should be like him in matters which concern us all, not long since, during a visit to the wonderfully extensive establishment of Scovill Manufacturing Company, we asked one of their obliging attendants to accompany us about the various departments, and point out to us the things of most interest to the trade at present, as though we were an utter novice entirely unacquainted with the place, in reality such an old, old story with us. The result was very interesting, and brought to our notice many things which our readers ought to know, but our pages this month will only allow us to mention a small part as follows:

Ready-sensitized paper has now become a regular article of commerce here, is put up in two dozen packages and sold at three dollars per dozen, by all dealers. It is an imported article and very excellent.

Atwood's Patent Reversible Printing-Frame is one of the latest novelties. This frame is square, is made with double corners, and in utility combines the action of the regular and the lengthwise printing-frames. The back also of this ingenious frame is square, with small blocks cut out to fit the corners, thus allowing the back to be placed upon the negative so that the springs and hinges will extend either lengthwise or crosswise of the subject. The advantage of this action will easily be perceived.

A new invoice of porcelain-ware and evaporating-dishes had just arrived fresh and clean and good from the foreign potteries. Nothing to displace them entirely. The ebonized trays sold by this house, we were authorized to say, are made upon a base of black sheet-iron and not upon tin. A stack of German solid glass baths we saw as high as a skylight and as glistening.

The S. P. C. preparations, so well thought of in the trade, were apparently going out with every order Varnishes, dry colors—a fine quality, Nelson's photo-gelation, sea island cotton, Japanese colors of best grade, and so on *ad infinitum*. *The Photographic Amateur* was being sent off by the thousand. Osborne's Foregrounds were in great demand and growing more and more popular daily. *The Irving Albumen Paper* is causing some fine testimonials to come back for it, on account of its easy working qualities and excellent productions. Amateur outfits were evidently the *craze* of the place, and were being shipped to all parts of the world. A list of these given us is a great commentary on the present status of our wonderfully growing art. But we must desist; this establishment is the great "bottom of things"—the starter in our art, and without doubt "headquarters." Success to it.

OUR PICTURE.

The airy little maiden whose picture graces our current issue, was good enough to pass the ordeal necessary to enable Mr. F. W. Guerin, of St. Louis, Mo., to compete for the various prizes offered by Messrs. G. Gennert, of New York, and Cramer & Norden, of St. Louis, a few months previous to the late Convention. And thanking our sweet little friend for the pleasure she gives us all, we proceed to the further facts of the case.

Mr. Gennert's offer, which first appeared in the May issue of our magazine, reads as follows:

The undersigned, desirous of increasing the interest in the coming Convention of 1881, of the Photographers' Association of America, and in the growth and improvement of our art, begs to call the attention of progressive photographers to his offer of three prizes for the best examples of plain photography sent as below within the time, and upon the conditions following:

THE PRIZES ARE

No. 1. $50.00 for the best five cabinet size negatives, retouched or untouched.

No. 2. $30.00 for the *second* best five ditto.

No. 3. $20.00 for the *third* best five ditto.

PROOFS.

A proof from each negative, printed on the Eagle brand of Dresden Albumen Paper, unmounted, and the above stamp to appear on the back of each print, with the private mark only of the photographer upon them,

must accompany each parcel, together with a letter describing said private marks, and giving full details as to the production of the plates and prints.

THE JUDGES

will be appointed by the Convention, and to them the negatives will be handed; they will *award the prizes* and announce them to the Convention.

The three successful lots will be offered to the publishers of the magazines, who will draw for a choice, to illustrate their periodicals.

THE TIME

given to prepare and send negatives will be limited to one week previous to the opening of the 1881 Convention, and no late ones admitted to competition.

All negatives and proofs must be sent, *prepaid*, to Mr. L. W. Seavey, Local Secretary, No. 8 Lafayette Place, New York.

As this offer is made with the desire to improve photography, a generous and lively competition is hoped for.

The Judges will not know whose work they are examining, or to whom the awards are made, until after their decision is rendered.

G. GENNERT,
Importer of "Eagle" and S. & M. Dresden Paper,
No. 105 William Street, New York.

Messrs. Cramer & Norden's offer reads as follows:

TO PROVE THE SUPERIORITY OF DRY-PLATES.

Cramer & Norden offer a prize of Fifty Dollars for the best set of negatives, not less than five in number, on dry-plates of their manufacture; size not less than cabinets, or larger than 8 x 10. The President, Secretary, and Treasurer of the Photographers' Association of America are requested to appoint a committee of three to act as judges.

The negatives and proofs of same must be sent prepaid to Mr. G. A. Douglass, care of Mr. L. W. Seavey, No. 8 Lafayette Place, New York, for examination at the coming Convention.

They must be marked on a piece of paper, gummed to the corner, "Cramer & Norden's plate," and the name of the artist. The negatives will be used to illustrate the photographic journals, provided the exhibitor does not object.

CRAMER & NORDEN,
St. Louis, Mo.

The result of these generous offers was anything but encouraging to the gentlemen who made them. Of course a large number (in view of the fact that only a few comparatively were working dry-plates) was not expected. But there might have been more interest taken when it was desired to attain two such good objects as those expressed by the parties making the offer. But even this was not the worst discouragement they had. When they came to the Convention assembled, and asked for judges to be appointed to examine the work of their own members, that august body scratched its head pensively, put its index-finger beside its nasal organ, thought it smelled a "stock-dealer" in it, and refused to accommodate. Thus snubbed, but not utterly cast down, our prize offerers secured the interest of certain of their co-workers, who acted as jury, and made the following report, which appeared in the daily *Photographic Times* of Thursday, August 18th:

THE PRIZE COMMITTEE.

The committee on awarding the prizes offered by Messrs. Cramer & Norden, of St. Louis, for the best five negatives made upon their dry-plates, and by Mr. G. Gennert, as announced in his offer a few months ago, organized with H. Rocher, of Chicago, Chairman, and W. A. Armstrong, Secretary.

It was resolved to consider negatives of 5 x 8 and 8 x 10 inches in size, and the award to be based upon the chemical and general technical qualities of the negatives, and those offered for the Cramer & Norden prize were considered first. The vote was by secret ballot upon lots No. 1 and No. 2, the former having been made by Mr. Fitz W. Guerin and the latter by Mr. John A. Scholten, both of St. Louis. The result of the first ballot was in awarding the first prize to Mr. Scholten, and the second to Mr. Guerin.

The negatives and prints sent in competition for Mr. Gennert's prizes were next offered. The first prize was awarded to

Mr. John A. Scholten, and the second to Mr. F. W. Guerin. The third prize was awarded to Mr. L. Piper, all of St. Louis.

The *Philadelphia Photographer* will use Mr. Guerin's negatives, and a portion of Mr. Scholten's, for its embellishments presently, and the *St. Louis Practical Photographer* will use the rest of Mr. Scholten's for a similar purpose. The whole Committee of Judges was: Messrs. H. Rocher, Chicago; James Mullen, Lexington, Ky.; R. A. Lewis, New York; E. R. Rockwood, New York; E. Klauber, Louisville, Ky.; W. A. Armstrong, Milwaukee, Wis.

The pictures before you are made from the negatives for which the Gennert prize was awarded to Messrs. Cramer & Norden, and from emulsion plates of their manufacture. They will give our readers a chance of comparing such work with their own best wet-plate results, and serve a very useful purpose in that direction, we hope.

The prints were made on the brand of paper alluded to above, and of the tint known as *pense.* In printing this paper our usual formula was used, which has been so often given in these pages, without any alteration. The paper works beautifully regular and easy, and the results it is not for us to praise. They are before you. We have letters from several parties commending this paper, and give *their* formula below for the benefit of parties who may see slight advantages in them over ours.

One of these is from Mr. John A. Scholten, of St. Louis, as follows:

Silver Bath.—Forty to fifty grains in strength.

Toning Bath.

Acetate of Soda,	15 grains.
Chloride of Sodium,	10 "
Water,	24 ounces.

Add gold and neutralize with bicarbonate of soda. This toning solution must be made a day before using. It is an old formula, and I am sure any printer can work it without any trouble.

Mr. Harry Sutter, of Milwaukee, Wis., has been working this paper some time, and with some fine prints sends the following letter:

"The results so satisfactory to me I get with an old toning and silver bath, which I have been using for some time.

"My silvering bath is nitrate of ammonia. I make in the first place a plain solution, sixty grains strong. I then add ammonia till it turns to a very deep brown or red, then add nitric acid till it becomes just clear. Be careful not to add too much acid, just merely enough to clear it; then sun it for an hour or so, and it is ready for use. Float your paper one and a half minutes, and fume about fifteen to twenty minutes.

"For my toning solution, to one grain of gold I add twenty drops of saturated solution of tungstate of soda and ten drops of saturated solution of borax. I make up the toning bath the day before using, to give it full time to ripen."

We now leave the matter in your hands, to profit by whatever lessons you can obtain therefrom.

We are informed that the prizes have all been paid, and this giving of the results to our readers completes the programme intended by the gentlemen named, to whom we tender our thanks.

SOME CLINKINGS FOR MOSAICS.

BY J. F. RYDER.

It is what the man *saves* that makes him rich. It is the minute quantity of silver that forms the photographic image. So, little by little, is knowledge gained; small acquirements from wide opportunities.

We must read, and we may work. We may carefully note the good points of other men's productions.

We must open our ears when skilled men speak, and may pick up unexpected bits from the novice.

It is of great profit to see what other men are doing, if we be ambitious of progress. The fleet roadster mends his pace at sound of other hoofs.

Among the great benefits that could reach the photographer, is that which he denies himself, and which he is in turn denied—FREE, FRIENDLY *intercourse* with his neighbor. The farmer throws broadcast the good grain to the fields, and a day comes when he reaps an hundred-fold; in like manner could thousands of jealous, selfish men throw courtesies upon their neighbors, which would yield a good return. Men, as well as fields, can be cultivated and "worked." So mote it be!

Editor's Table.

A Fine Picture.—Mr. C. A. Stacey, of Lockport, N. Y., receives a very flattering notice in the *Niagara Falls Gazette*, of October 16th, of a picture of the Union Reed Band of Suspension Bridge. The picture was placed on exhibition at the Niagara County Fair, and was greatly admired. We congratulate Mr. Stacey on his success in producing a work of such merit.

Mr. George S. Cobb, of Binghamton, N. Y., says: "The *Photographics* I bought some time ago is worth about fifty dollars or more to those who read and then execute their knowledge. The article on gelatin dry-plates alone pays me well for buying the book." The first one thousand *Photographics* is nearly gone, and the second has been ordered.

New Catalogue.—We have received from Mr. George Murphy, No. 9 W. Fourth Street, N. Y., his new catalogue of photographic materials, printed on pink paper, with gray covers, which is very neatly gotten up, and will be found very useful to those wishing goods in his line. Mr. Murphy is an enterprising young man, and merits the success which his energy will win.

We have received from Douglass, Thompson & Co., of Chicago, the *Photographers' Bureau of Information*, which contains many useful hints, among which is a good square talk to the members of the National Photographers' Association of America on their duties. It is worthy of perusal.

Photographics.—Mr. Dalgleish, of Beaumont, Texas, writes, "I am well pleased with your *Photographics*; think more of it than all the rest of my photographic literature. Wish you every success."

June and March Numbers of the *Philadelphia Photographer* for 1880 are wanted, for which one dollar each will be paid in books at this office.

Mr. C. W. Hearn, 514 Congress Street, Portland, Me., sends us an invitation to be present at the opening reception of "Hearn's Palace of Photography," on Thursday evening, November 3d, 1881. We understand that the entertainment was a grand success, and a fine display of art photography was exhibited. The Portland *Press* gives a glowing report of the success of the above.

Douglass, Thompson & Co., of Chicago, send us their forty-page price-list, beautifully printed on variegated paper, nicely gotten up, and full of useful hints and information. It will be found of great worth to all the craft.

Mr. C. A. Stacey, of Lockport, N. Y., has sent us a sample of his Niagara compound for grinding negatives for retouching, possessing all the qualities, without the use, of pumice-stone. Try it.

Christmas Chromos.—Our readers will notice on another page L. Prang & Co.'s advertisement of Christmas and New Year's cards for 1881–82, which will be found among the very best. We would call special attention to their new art works, "Art in the House," and "The Theory of Color," as works of great merit. See the price-list and catalogue.

W. C. Carland, manager of the Gouverneur Background Company, Gouverneur, N. Y., sends us their announcement circular to photographers. Among its specialties may be found "Rustic Backgrounds," "The Carland Balustrade," "The Carland Boat and Water Foreground," grass mats, etc., and "How to Order Goods," which is to the point. It is full of useful suggestions.

Douglas Hellberg, in the employ of Copelin's Photograph Gallery, Chicago, committed suicide, on the 6th of November, by cutting his throat, having previously cut his wrist, and turned on the gas in his room to smother himself if the razor failed to do its work.

The Cincinnati *Commercial* reporter has made a visit to Mr. Landy's studio, and had his head taken off by the emulsion dodge, while in the act of arguing with Mr. Landy that he had not the time to have it done. His tongue runs on about it in a half column of the *Commercial*, thus: "A *Commercial* reporter, detailed by the city editor to give the advertised wonder a practical test, made an engagement with Mr. Landy for 1 o'clock yesterday. At that hour he found himself hurried by other business, and requested a postponement until he had more time. 'Time,' said Landy; 'we don't want any time. The great danger in taking these picture is in giving them *too much time*;' and while he spoke he had signalled his assistant, and the reporter had been taken in two different positions. Three more negatives were then taken, the whole five, including the placing of the subject and the insertion of the plates in the box, occupying literally only five minutes of time. The exposure was literally hardly a second, and even then the lights had to be subdued on account of the fine day."

Dr. R. Shelton Mackenzie, in the *Evening News*, said of our November issue: "This month's *Philadelphia Photographer* has for its frontispiece a strikingly effective landscape entitled, 'Circe and the Gloriette,' taken at Dixville Notch, New Hampshire, by Mr. Edward L. Wilson of Philadelphia, proprietor and editor of the *Philadelphia Photographer*, which he commenced some eighteen years ago. His description of the taking of this picturesque view is well written and enthusiastic to a degree." Published at 912 Chestnut Street, Philadelphia.

After the above was in form and ready for press, we learned of the sudden death of our dear old friend Dr. Mackenzie, on November 21st. We shall prepare a sketch of his life for our next issue.

Osborne's Pedestals for Photo-Statuary.—Mr. W. D. Osborne, No. 1526 Brown Street, Philadelphia, has shown us a very pretty design for a pedestal for photographic statuary, which will prove far less obtrusive and more artistic than etching upon the negative, or using clumsy wooden designs. They are made reversible, and can be used with right or left, according to the lighting of the subject. Scovill Manufacturing Company are his agents for these as well as for his foregrounds. Two examples of the last will appear in our next issue—January.

Mr. Alva Pearsall, Brooklyn, N. Y., gave day and evening receptions at his studio, on October 18th, 19th, and 20th, which were largely attended by the elite and fashion of the city, and which resulted in a splendid lot of orders being received by him. "The Masterpiece," his new ideal of a picture; "The Tadema," the photographic plaque; and the panel picture, with his emulsion instantaneous work, excited the greatest admiration and approval of Mr. Pearsall's patrons. The newspapers are loud in their praise of the grand exhibition, and it was a great success.

The Beebe Plates.—Mr. J. E. Beebe, the gent who showed such a kindly disposition to impart helpful information at the late Convention, some time ago, conscious of the excellent quality of his own make of emulsion plates, offered a few for sale to some friends. He little knew what he was doing, for the result of it has been that he has had to form an alliance with some friends, and go into the manufacture of plates largely. They have formed the Chicago Dry-plate Company, with Mr. Beebe as President, Mr. Charles E. Chase as Secretary and Treasurer, and Mr. T. B. Rader as Superintendent, and have so enlarged and improved their premises that no one firm can handle all their product. They are, therefore, prepared to suppy the trade generally with a first-class guaranteed plate in any size or quantity. We have received some of their plates, which we shall soon put to a test. They are very handsomely put up.

Another great art reception was given at his studio by Mr. Leon Van Loo, Cincinnati, O., on Tuesday, October 25th, from 2 to 5 P.M. It was a grand affair, and was accompanied by a collation. Only invited guests were present. Mr. Van Loo's finest productions were exhibited, besides the fine collection of bric-a-brac, paintings, etc., which adorns his studio at all times. The Cincinnati *Commercial* devotes nearly a column to an account of this affair, and says a great many good things which we wish we had room for. Mr. Van Loo's invitation cards were very tastily designed and printed.

The *Photographic Times* for November is a fine example of what enterprise and the determination to benefit the fraternity in the matter of the new emulsion process can do. Besides the usual amount of interesting matter, appears all the practical part of Dr. J. M. Eder's new book, *Modern Dry-Plate or Emulsion Photography. The whole can be had for twenty cents*, and should be owned by every photographer without delay.

Mr. W. F. Ashe, 109 Bleecker Street, N. Y., is growing more and more into popularity as a background artist. A visit made to his studio recently gave us an opportunity of examining his excellent productions, and of seeing just how hurried and driven he is with orders away ahead. He *won't* send out work not having his personal attention, so what he produces is worthy of his name.

Low Prices.—The Chicago and Baltimore photographers are handling this subject in the most determined and manly manner, and this must be done everywhere, or the degradation of photography is sure. We are not called upon to interfere with any one's private affairs, but a matter of this kind is of the public welfare, and we can only wish shame to come upon *any one* who will degrade our art, when all should strive hard to elevate it. Matters are in a critical condition when we see a photographic publisher, a long-time stock-dealer, and a dweller in a "palace of photography," resort to "cut rates" to make business. The moral and the lesson are plain in each case.

GELATIN, AHOY!—There is no doubt now but what the gelatin-emulsion process is making friends wherever it is given a fair trial. Only look at the "Society Gossip" this month, and *Mosaics* for 1882, for confirmation of this.

INSTANTANEOUS EMULSION PICTURES.—A most wonderful collection of pictures has been sent us by Mr. JOHN CARBUTT, made by JOHN C. BROWNE, ESQ., Philadelphia, upon the new J. C. B. brand of "Keystone" plates. They comprise views of steamboats and yachts under full "go" and of the animals in the Philadelphia Zoological Garden. Among these last are elephants bathing, a monkey drinking, birds, deer, donkeys, lions, camels in groups, and many other animals, all caught in the most natural positions, and in every respect excellent as photographs. Surely this new brand of plates named in honor of Mr. Browne, who has done so much to prove their quality, will be a great power in the hands of the photographer. Whoever tries to use them, however, must be lively, or they are overtimed. Mr. CARBUTT, and all the dry-plate makers we know of, are most fully occupied. We learn of one order of 1800 plates of various sizes.

THE GARFIELD PORTRAITS AND OBSEQUIES.—The portraits of our lamented President and his family which were most approved were made by Mr. J. F. RYDER, of Cleveland, O., and have been published by him in various sizes. For months past Mr. RYDER has been busied with his whole force in producing these pictures, and there is scarcely a picture store in the country where they are not for sale. Added to them is the interesting but sad series of pictures of the obsequies at Cleveland, and the Ohio home of Mr. Garfield. They are all valuable souvenirs and excellent photographs. A full set of them, including 13 x 16 portraits of Mr. and Mrs. Garfield, and Grandma Garfield, have been sent us by Mr. RYDER. They are admirable in every way. President Garfield was a great believer in photography, and next month we will report something he said about it in a New Year's article for our younger readers.

THE IVES' PICTURES ON OUR COVER.—We present *two* examples on our cover this month, reproduced and much reduced from photographs by the IVES' process. We consider them superb and worthy art studies to close our year eighteen with. The accessories about the figures are from two of Mr. W. D. OSBORNE'S "pictorial *foregrounds*," and are splendidly rendered by this process. It seems marvellous that photography can produce such results without one bit of hand engraving: it is wonderful. In our January issue we will present the photographic pictures of these same IVES' girl groups, when our readers can compare them. The portraits were made by Mr. OSBORNE, at Messrs. GILBERT & BACON'S studio, 40 N. Eighth Street, Philadelphia.

DEMAND FOR THE IVES' PICTURES.—Although they have not yet commenced to advertise Mr. IVES' new process, Messrs. CROSSCUP & WEST have orders on hand for two months ahead, and have been obliged to refuse a good many others. They will increase their facilities as rapidly as practicable, and will very soon be prepared to meet the demand.

WE have received from BENJAMIN FRENCH & Co., 319 Washington Street, Boston, an illustrated catalogue of VOITLANDER & SON and DARLOT lenses. This catalogue is of great value to parties wishing to purchase lenses, no matter what kind they may buy. Appended to this catalogue is a list of their new wide-angle euryscopes provided with rotating stops.

PHOTOGRAPHIC *Mosaics* for 1882 will reach many of our readers before this notice does. It is replete with useful information, and is fast being sold, nearly three thousand copies having been ordered before it was seen by a single person, even the editor himself. On the fourth page of the cover of our magazine will be found a table of contents, by reference to which will be seen the subjects treated on, thus enabling the reader to see the great worth of the book. We had hoped to find space for a few extracts from its pages, and several articles received too late for it, but want of space forbids, and we have to defer till next month. All wanting the book should order at once. Just think, one hundred and forty-four pages for fifty cents! Last year many were too late in ordering. Don't delay.

HAPPY NEW YEAR, one and all, but first a good holiday trade wish we for every one. The prospects are good. Cheer up.

OUR MAGAZINE!

1882.

The Eighteenth Year of the "Philadelphia Photographer" *closes with the December number, and as usual at this season, we come to our readers with thanks for their patronage and hopes for a renewal of their subscriptions.*

The advanced position *which we have maintained for our magazine in all these years should be an earnest to its patrons of the help it will be to them in the future.*

Its circulation is far the largest of any, *though other magazines in the same line are offered for two-fifths and three-fifths of its cost.*

Photographers will have the best, *and therefore the* PHILADELPHIA PHOTOGRAPHER *continues to be the best patronized.*

The extra money we get *we always divide by securing the best home and foreign writers, the finest engravings, and the rarest pictures for embellishment.*

We make the thing mutual, *and give to our readers as they give unto us—always liberally.*

Entertaining, timely, and instructive *matter pertaining to our art is always given in these pages in fullest detail and never stinted.*

It is a continuous world's exposition *of what transpires, and has continually in view the* ADVANCE *and* PROGRESS *and* GROWTH *of the art, its votaries and their* BUSINESS INTERESTS.

Better results are promised *for the future, and no pains or expense will be spared to* SECURE *all needed, and to* PREVENT *all not needed by our subscribers.*

Our pictures *are partly printed for the new year, and include the work of Gilbert & Bacon (with two of Osborne's foregrounds), Philadelphia; eleven studies (in a "Mosaic" group) by five of the best Paris photographers; life statuary, by John A. Scholten, St. Louis; D. H. Anderson, New York; J. H. Lamson, Portland, Me.; J. E. Beebe, Chicago, Ills.; Henry Rocher, Chicago; a fine Colorado view; some views, etc., from foreign lands—as many as can be crowded in—an elegant album.*

Photo-engravings, *studies in pose, etc., will be profusely scattered through the volume, and* EVERYTHING *done to make this Magazine* SO GOOD YOU CANNOT AFFORD TO BE WITHOUT IT.

☞ WONT YOU PLEASE TRY TO INCREASE OUR LIST BY GETTING ONE NEW SUBSCRIBER

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Canada subscribers must remit 24 cents extra, to prepay postage.

Foreign subscriptions must be accompanied by the postage in addition.

ADVERTISING sheets are bound with each number of the Magazine. Advertisements are inserted at the following rates:

	One Month.	*Six Months.*	*One Year.*
One Page	$20.00	$110.00	$200.00
Half "	12.00	66.00	120.00
Quarter Page	7.00	38.50	70.00
Eighth "	4.00	22.00	40.00
Cards, 6 lines or less	2.00	11.00	20.00

The attention of advertisers, and those having galleries, etc., for sale, is called to our SPECIALTIES pages. Terms, $2 for six lines, and 25 cents for each additional line, seven words to a line, always in advance. Duplicate insertions, 50 cents less, each.

We have added an Exchange Column to our Magazine, wherein photographers having articles for exchange can insert advertisements at the low price of 15 cents per line, or fraction of a line, of seven words to a line.

Operators desiring situations, no charge.

EDWARD L. WILSON, Publisher and Proprietor, 912 & 914 Chestnut St., Philada.

1882

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1882

This Favorite Annual

READY FOR DELIVERY.

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Two thousand copies were ordered by one dealer before the book was printed, and nearly three thousand were sold before it came from the binder.

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